

INJURIES IN ALASKA: A Focus on Disparities

Part I, Injury Deaths, 1981-2000

July 2003

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The Alaska Women & Children Injury Disparities Project

- In 2001, the Maternal Child Health Bureau of the Health Resources and Services Administration funded a 2-year project to describe and reduce injury disparities experienced by Alaskan youth and young adult women, the Alaska Women and Children Injury Disparities Project.
- The project was housed in the Division of Public Health (DPH), Alaska Department of Health and Social Services. The two main project staff from DPH are:
 - Alice Rarig, MA, MPH, PhD
 - Andrea Fenaughty, MA, PhD
- The following individuals were also critical to the development of the project:
 - Susan Keady, RN, MS, Division of Public Health
 - Catherine Schumacher, MD, MSPH, Alaska Native Tribal Health Consortium

Project Partners

A group of professionals already involved in injury prevention and control in Alaska were brought together at the start of the project to form an advisory group that would provide ongoing guidance to DPH staff. Representatives from the following organizations were included in the Injury Disparities Advisory Group (IDAG):

- Alaska Bureau of Vital Statistics <http://www.hss.state.ak.us/dph/bvs/>
- Alaska Department of Health and Social Services, Section of Community Health and EMS Injury Prevention Program http://www.chems.alaska.gov/ems_injury_prevention.htm
- Alaska Department of Health and Social Services, Section of Community Health and EMS Trauma Registry <http://www.chems.alaska.gov/ems%5Ftrauma%5Fregistry.htm>
- Alaska Department of Health and Social Services, Section of Public Health Nursing <http://www.hss.state.ak.us/dph/nursing/default.htm>
- Alaska Department of Health & Social Services, Section of Maternal Child and Family Health Alaska Family Domestic Violence Prevention Program <http://www.hss.state.ak.us/dph/mcfh/akfvpp> ---leave for now, will change soon
- Alaska Injury Prevention Center <http://www.alaska-ipc.org>
- Alaska Native Epidemiology Center <http://www.anhb.org>
- Alaska Native Tribal Health Consortium <http://www.anthc.org>
- Suicide Prevention Council <http://www.hss.state.ak.us/suicideprevention>
- University of Alaska Anchorage, Institute on Social and Economic Research, Alaska Kids Count <http://www.kidscount.alaska.edu>

Project Goals and Background

- A primary goal of the injury disparities project was to describe racial and regional disparities in injuries among youth and women of childbearing age.
- Previous examinations of injury disparities in Alaska had been limited in scope, either looking at only a few indicators statewide or else focusing on only a select population.
- There was a need for a more systematic in-depth analysis of disparities, and a need to get this comprehensive analysis into the hands of the prevention specialists and service providers serving minorities, and both urban and rural at-risk groups.

Methods (I): Data

Data Sources for Injury Deaths Analysis:

- Department of Health and Social Services, Alaska Bureau of Vital Statistics
 - Injury deaths from 1981 through 2000, in 5-year aggregates
 - Death certificate ICD-9 and ICD-10 e-codes
 - Cause of Injury Death, Age, Sex, Race, Region of Residence, Region of Injury Occurrence
- Department of Labor and Workforce Development, Research & Analysis Section
 - Population data

Age-Specific Rates: Deaths per 100,000 population for the age group

Methods (II): Definitions

- **Youth:** Alaskan residents, age 0-19
- **Young Adult Women/Women 20-44:** Female Alaskan residents, age 20-44
- **Young Adult Men/Men 20-44:** Male Alaskan residents, age 20-44
- **Adults 45+:** Alaskan residents age 45 or older

- **Disparities** are “differences that occur by gender, race or ethnicity, education or income, disability, living in rural locations or sexual orientation.” (*Healthy People 2010*) Conceptually, “disparities” can be separated into “unavoidable” and “potentially avoidable” disparities. Many potentially avoidable disparities are deemed to be unacceptable or unfair, especially when they are related to unequal access to information or care.

Methods (III): Definitions

Racial Disparities: Alaska Native-to-White comparisons

- 2 groups together comprise 85% of population, 91% of injury hospitalizations, and 96% of injury deaths
- Numbers of next largest groups (Blacks, Asian/ Pacific islanders) too small to analyze separately
- Results from analysis of “Other”-to-White disparities may have less applicability for prevention
- “Other” race group injury rates tend to fall between those of Alaska Natives and Whites; smaller disparity than seen when comparing Alaska Natives with Whites

Regional Disparities: Rural-to-Urban region of residence comparisons

- **Urban** = residents of Anchorage, Fairbanks, or Juneau Alaska
- **Rural** = residents of any other region in Alaska
- Rates of injury and patterns among rates relatively similar within Anchorage, Fairbanks, and Juneau, contrasted with rates in other regions of the state
- Region of residence may be more useful than region of injury occurrence in describing the burden of injury death; other analyses may want to focus on the region where the injury occurred

Methods (IV): Assessing Disparity

“Rate ratios” and “rate differences” are commonly used measures of health status disparities between groups.

- The **rate ratio (RR)** is quite self-explanatory – it is the ratio of two rates, usually the rate for the minority group over the rate for the reference group. The more rare the outcome is, the more dramatic the rate ratio may become despite the particular cause being of less importance than other causes.
- The **rate difference (RD)** is calculated by subtracting one rate from the other. The rate difference helps to quantify a disparity in a way that tells more about the difference in the burden of disease or death on the population. For example, for suicide the rate difference between Alaska Native and White rates is very large, 17.7 per 100,000 (23.0 minus 5.3). The rate ratio for suicide is 4.4, high but not nearly as high as the rate ratio for snow machine deaths, which is nearly 20 to 1. The rate difference is only 2.8, because there were only 4 snow machine deaths to white youth in the period compared with 23 for Alaska Natives.

Injury Deaths for Selected Populations

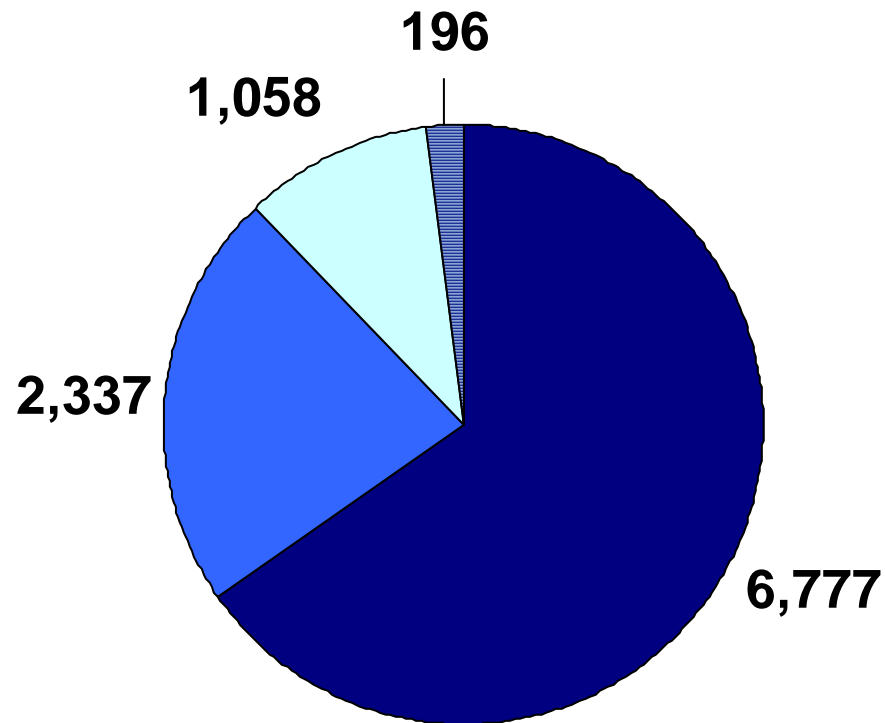
Alaska, 1981-2000

The Burden of Injury Death on
Youth (0-19), Young Adult Women (20-44),
Men (20-44), Adults 45 and older

Injury Deaths by Cause

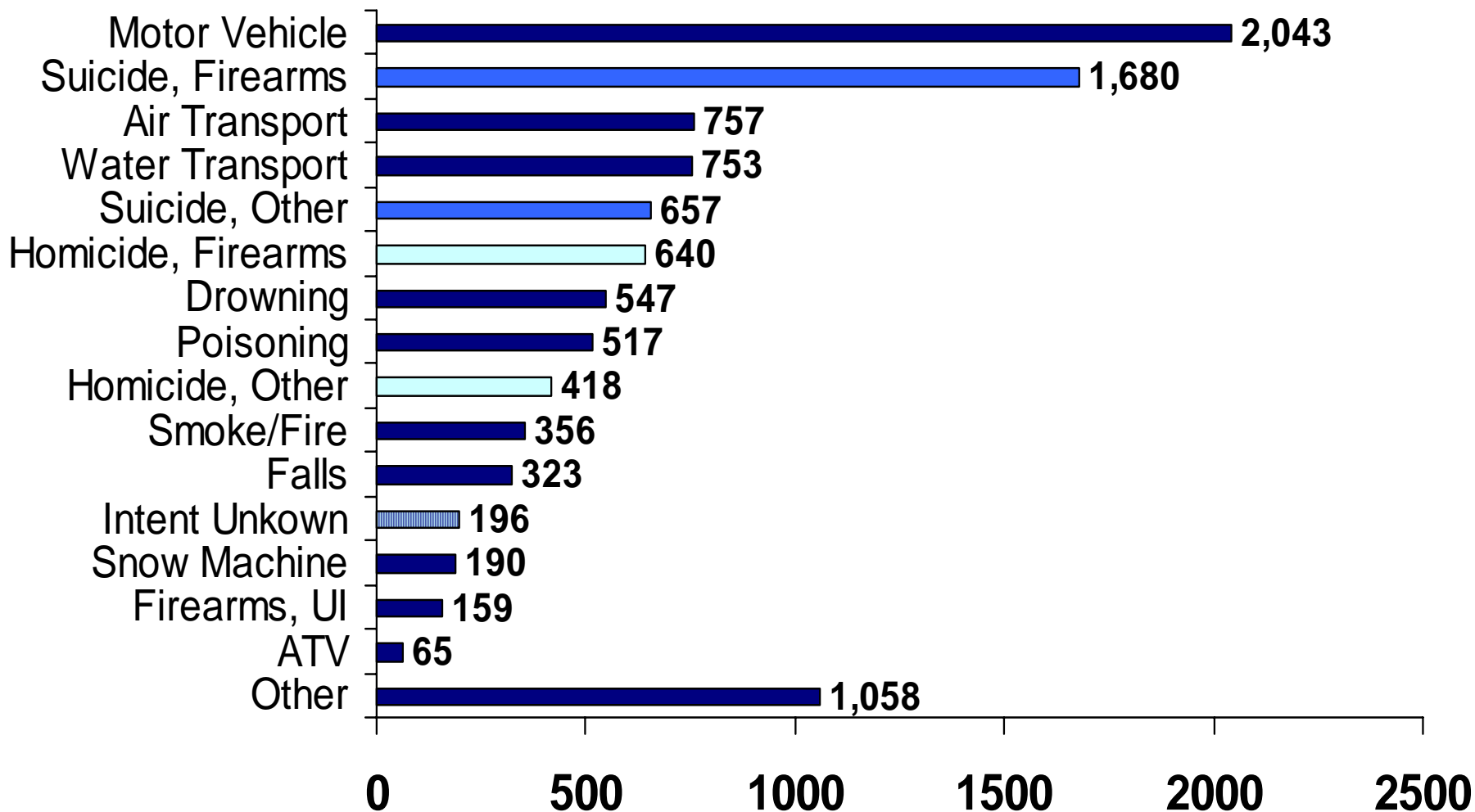
Alaska Residents (N = 10,368), 1981-2000

■ Unintentional ■ Suicide ■ Homicide ■ Intent Unknown



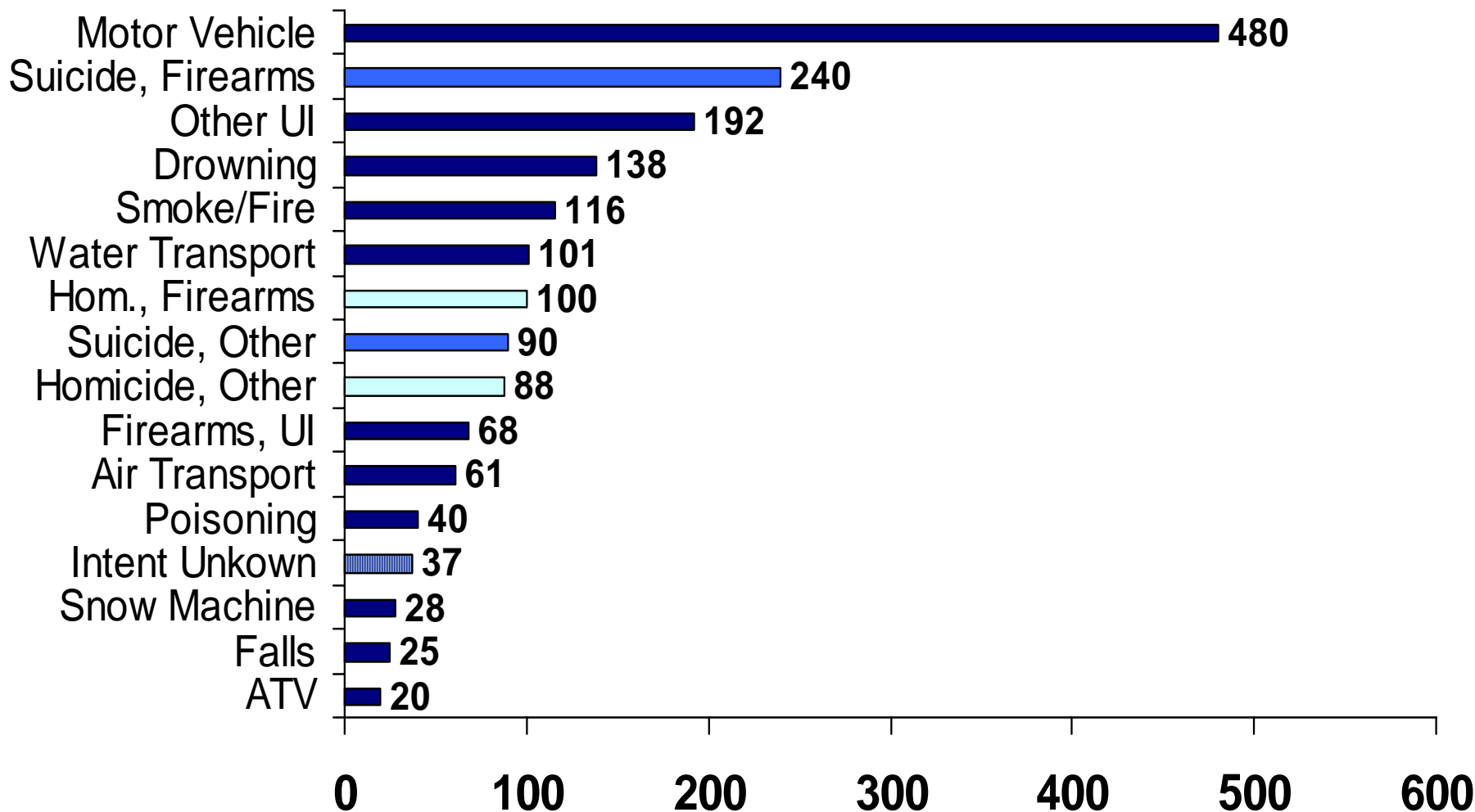
Source: DHSS/ABVS

Injury Deaths: Cause of Death for Total Population Alaska Residents (N =10,368), 1981-2000



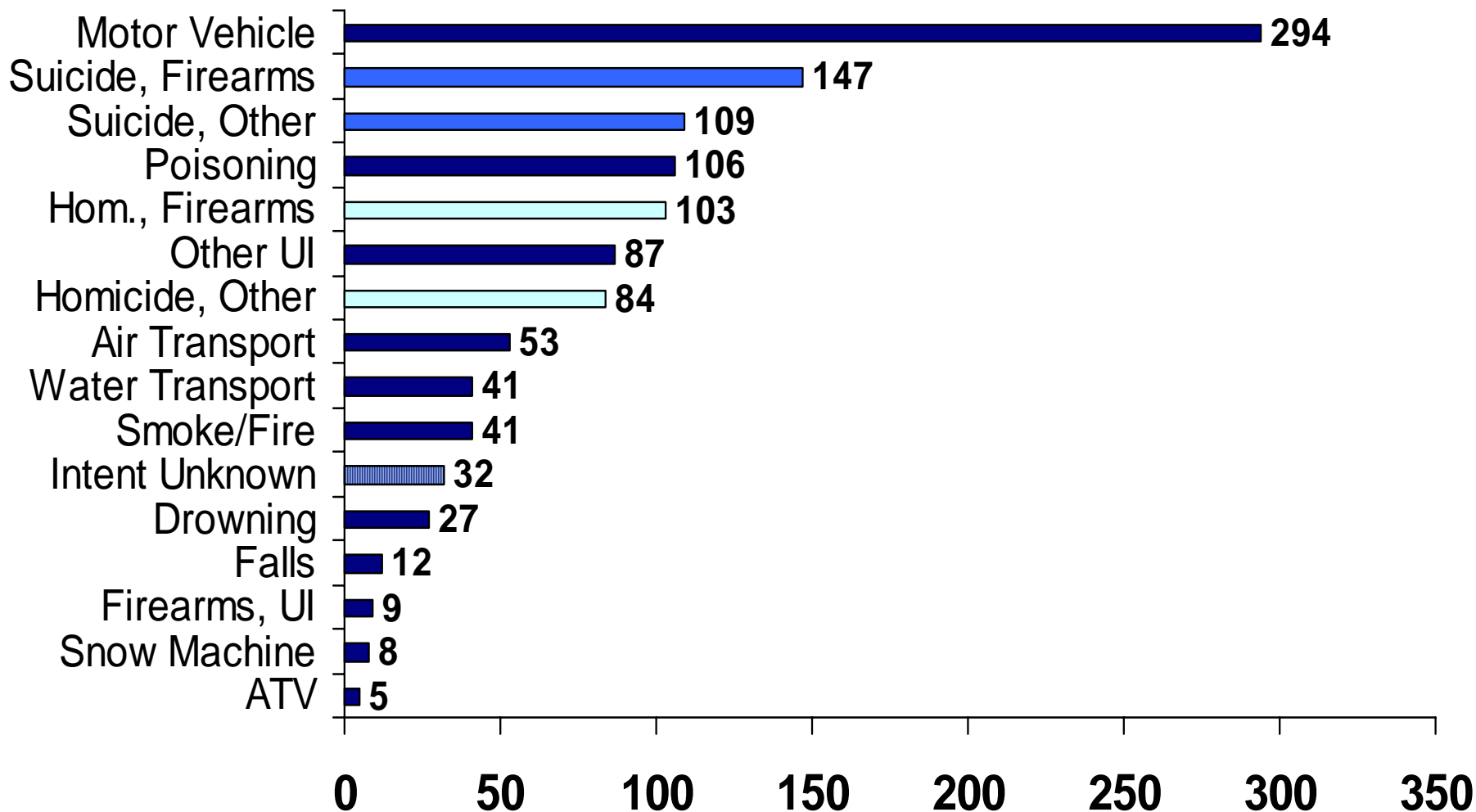
Source: DHSS/ABVS

Injury Deaths: Cause of Death for Youth 0-19 Alaska Residents (N =1,824), 1981-2000



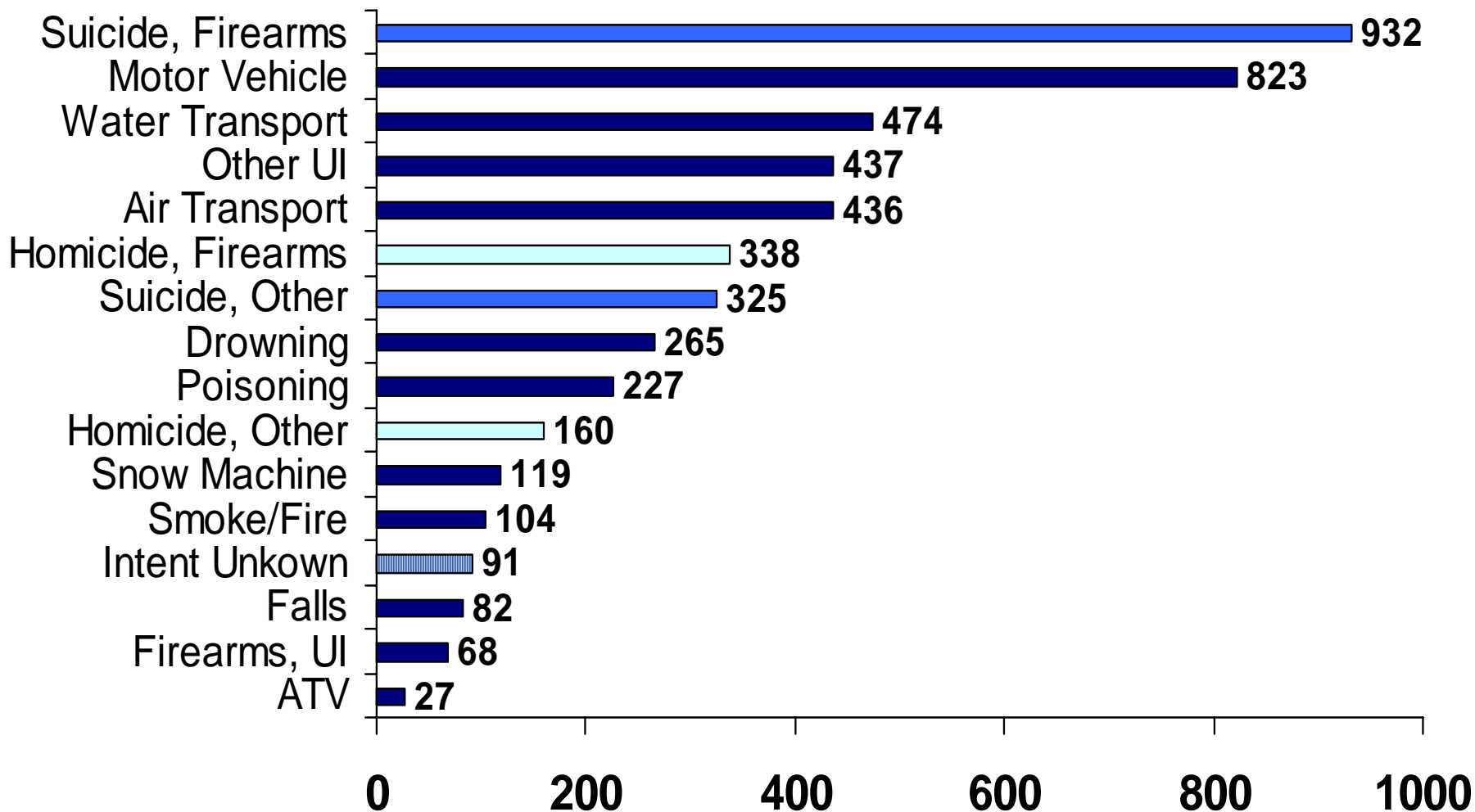
Source: DHSS/ABVS

Injury Deaths: Cause of Death for Women 20-44 Alaska Residents (N =1,158), 1981-2000



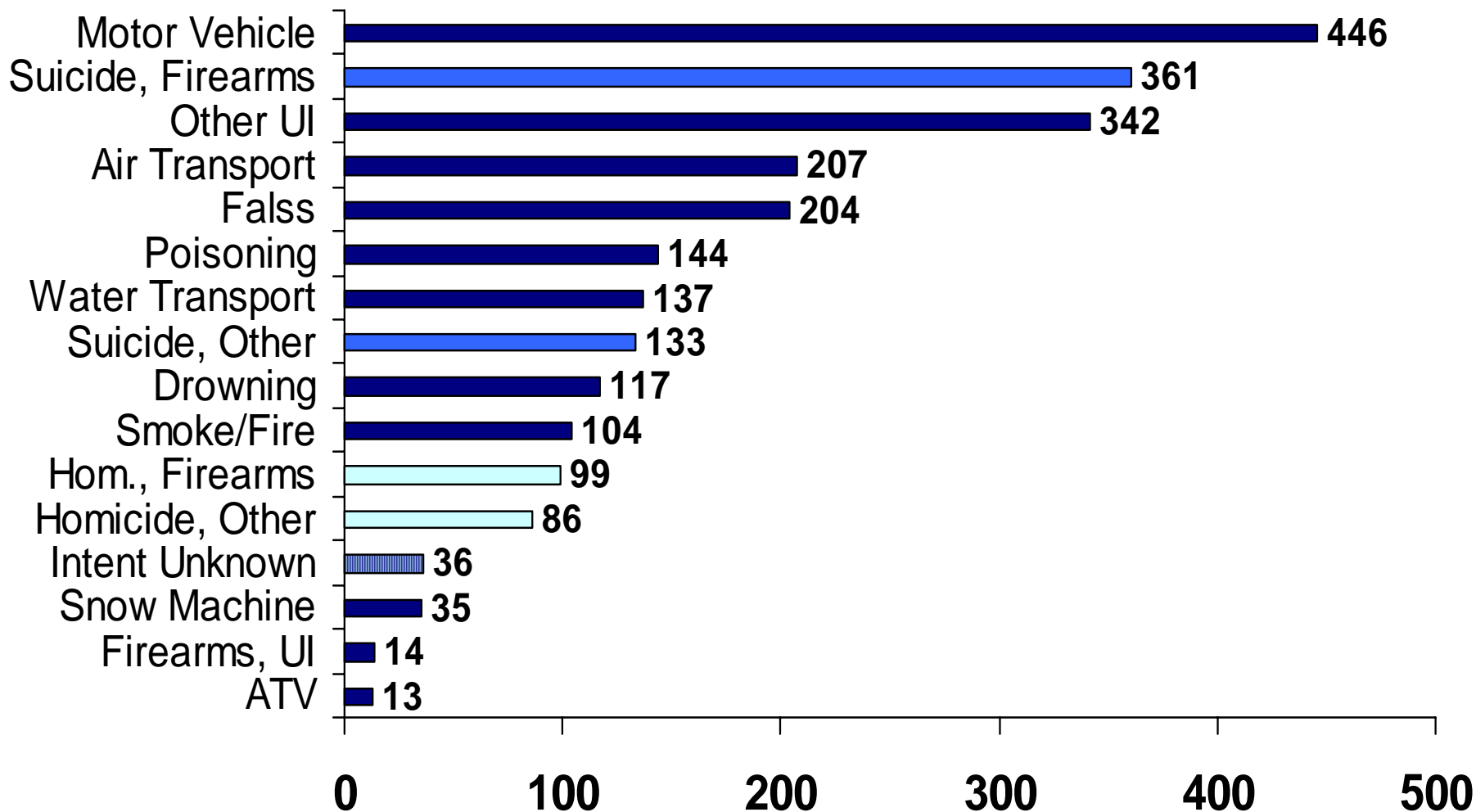
Source: DHSS/ABVS

Injury Deaths: Cause of Death for Men 20-44 Alaska Residents (N =4,908), 1981-2000



Source: DHSS/ABVS

Injury Deaths: Cause of Death for Adults 45+ Alaska Residents (N =2,478), 1981-2000

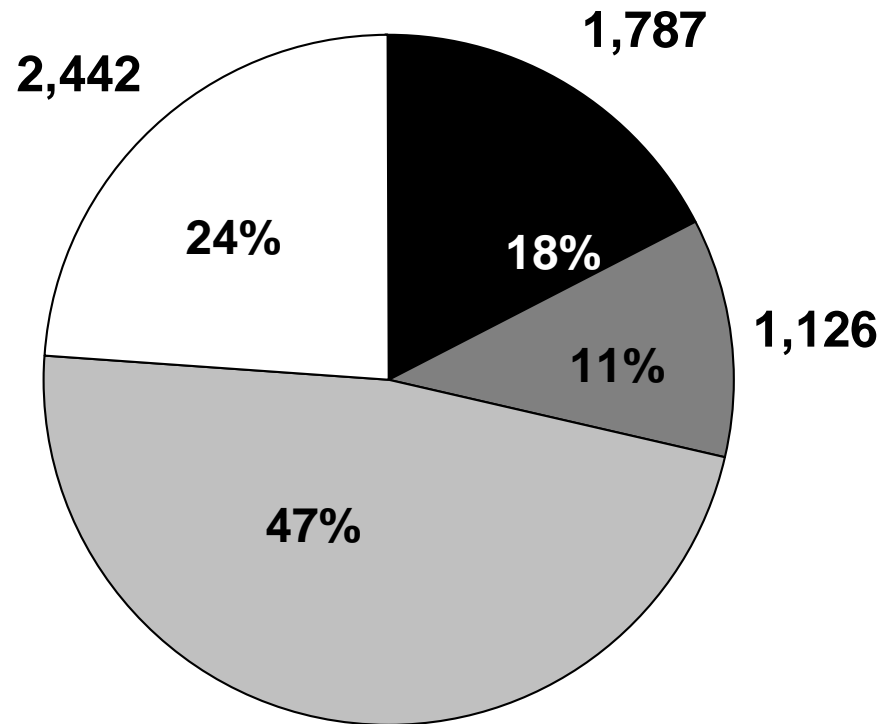


Source: DHSS/ABVS

Injury Deaths for Selected Groups

Alaska Residents (N = 10,172*), 1981-2000

■ Youth 0-19 ■ Women 20-44 ■ Men 20-44 □ Adults 45+

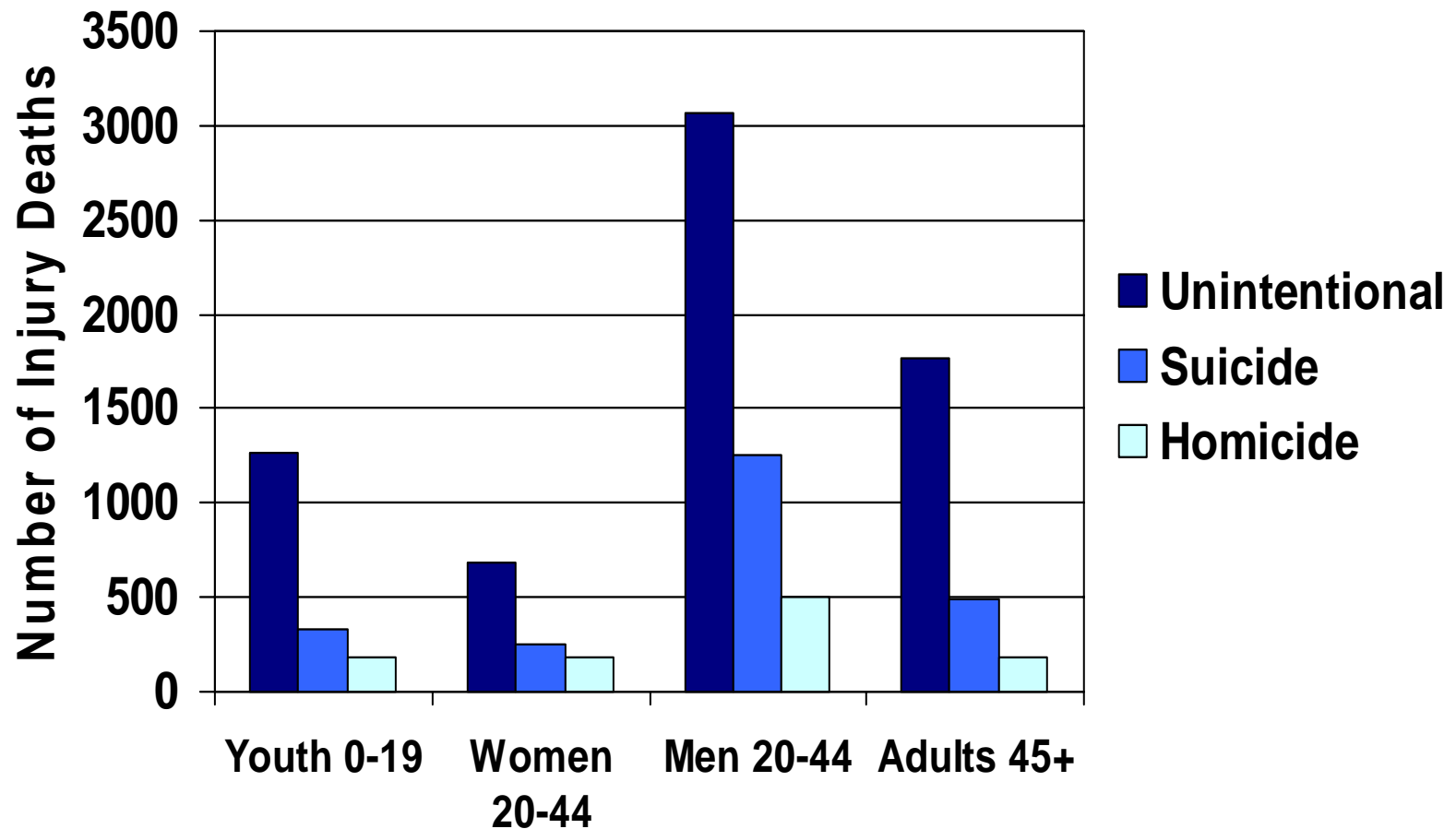


*excludes "intent unknown"

4,817

Source: DHSS/ABVS

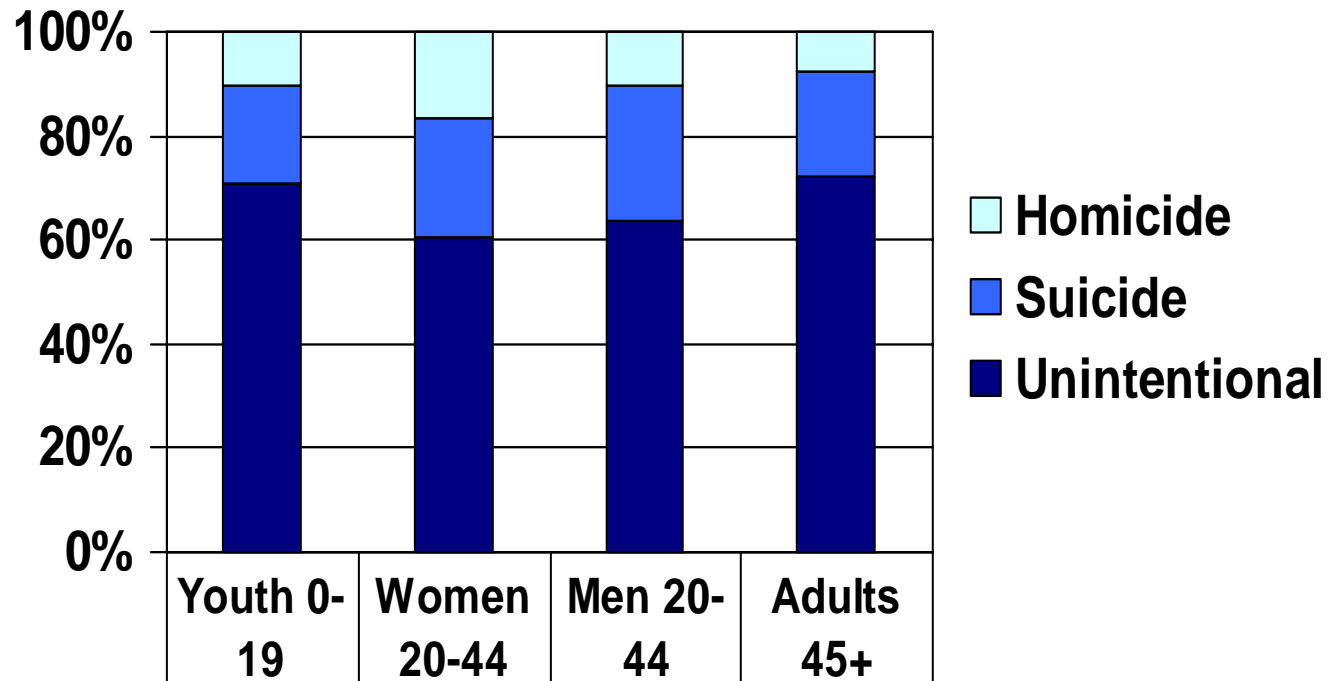
Injury Deaths by Cause and Target Population, Alaska Residents, 1981-2000



Source: DHSS/ABVS

Injury Deaths by Cause and Target Population, Alaska Residents, 1981-2000

Number of Injury Deaths



Homicide	188	187	498	185
Suicide	330	256	1257	494
Unintentional	1269	683	3062	1763

Source: DHSS/ABVS

Summary: The Burden of Injury Death

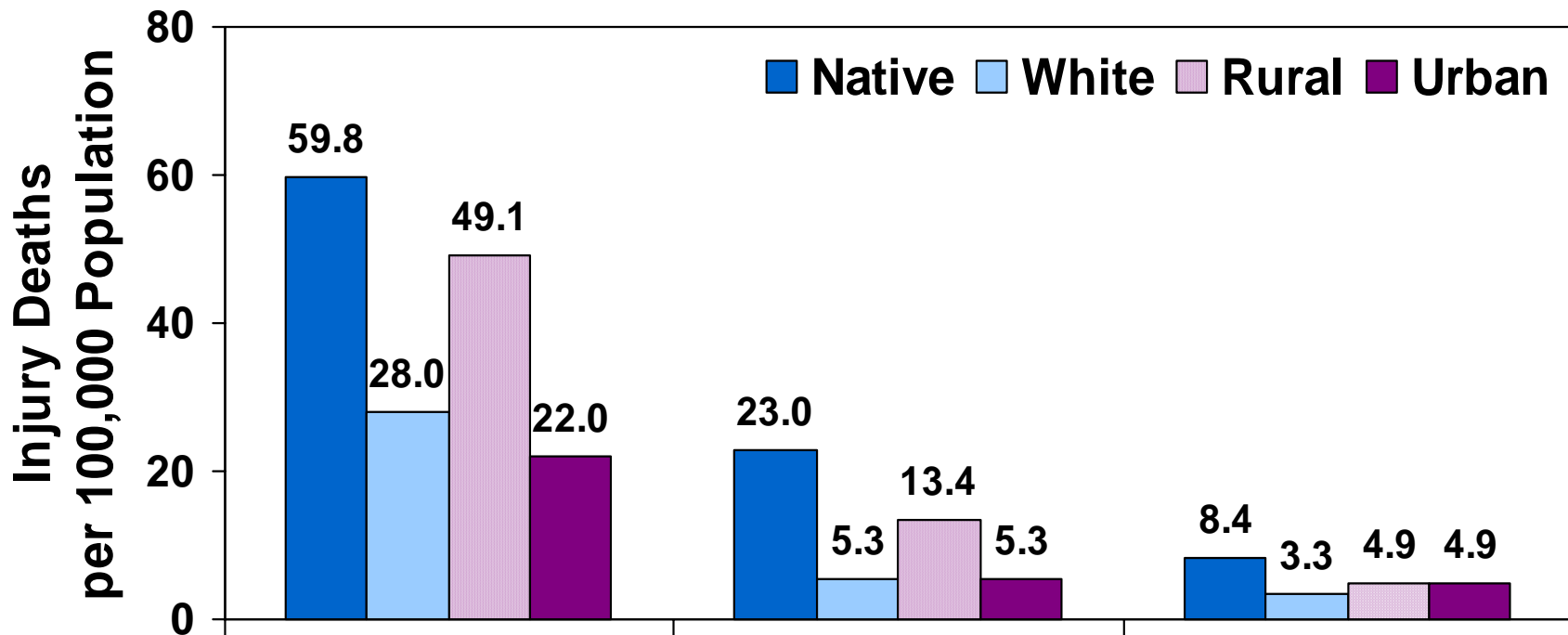
- ✓ There were 10,368 injury deaths among Alaskans between 1981 and 2000, the majority of which were due to unintentional injuries.
- ✓ **Motor vehicle crash** was the most common specific cause of injury death among youth 0-19, women 20-44, and adults 45 and older; **suicide by firearms** was the most common specific cause of injury death among men 20-44.
- ✓ Combined, Alaskan youth (0-19) and young adult women (20-44) accounted for 29% of all injury deaths between 1981 and 2000.
- ✓ Homicide deaths make up a larger proportion of injury deaths among women compared to the proportion of homicide injury deaths among youth, men 20-44, or adults 45 and older.

Racial and Regional Disparities in Injury Death Rates

Major Causes of Injury Death Alaska, 1981-2000

Age Specific Rates,
Rate Ratios and Rate Differences
with focus on Youth (0-19), Women and Men 20-
44, and Older Adults (45 and older)

Racial and Regional Disparities in Injury Death Rates: *Youth 0-19, 1981-2000*



N:W RR = 2.1

R:U RR = 2.2

N:W RR = 4.3

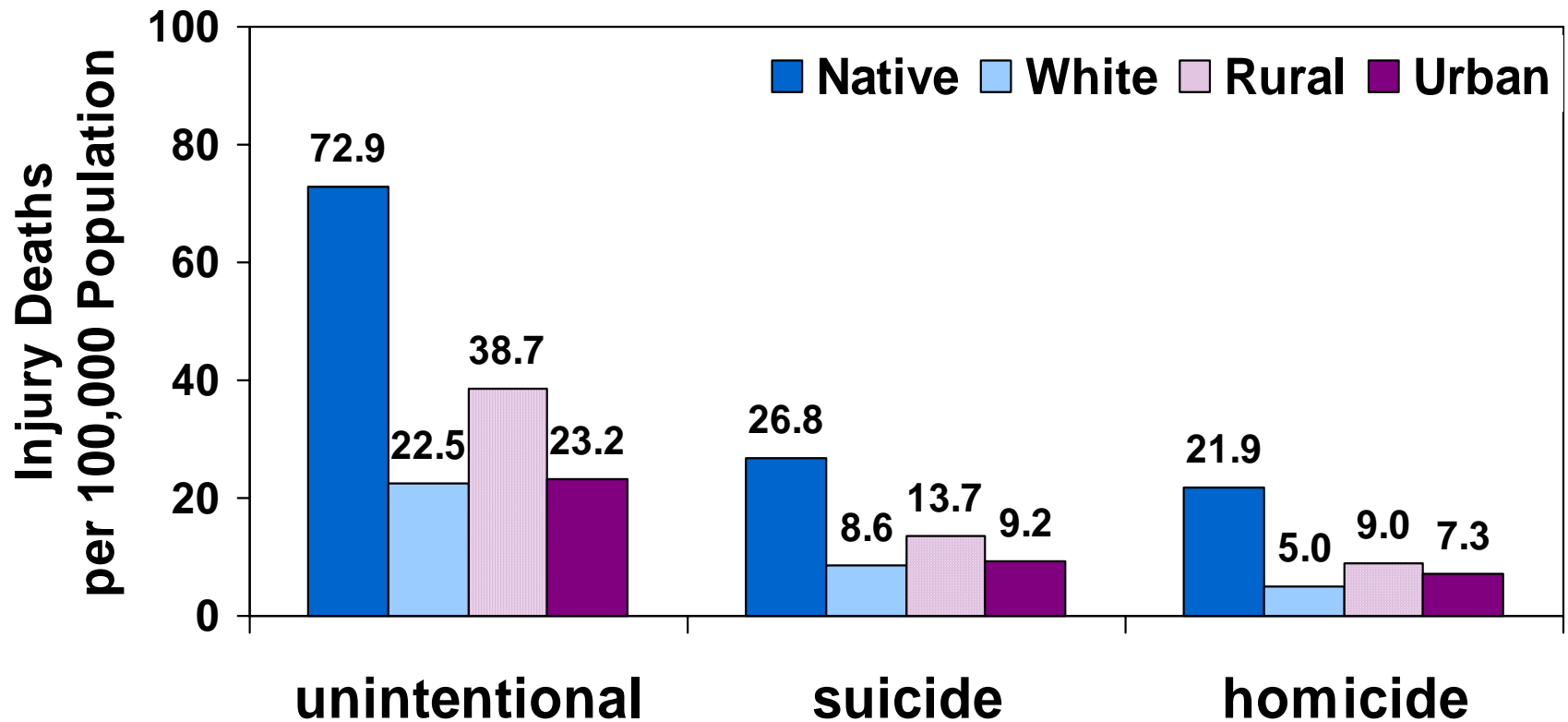
R:U RR = 2.6

N:W RR = 2.6

R:U RR = 1.0

Source: DHSS/ABVS

Racial and Regional Disparities in Injury Death Rates: *Women 20-44, 1981-2000*



N:W RR = 3.2

R:U RR = 1.7

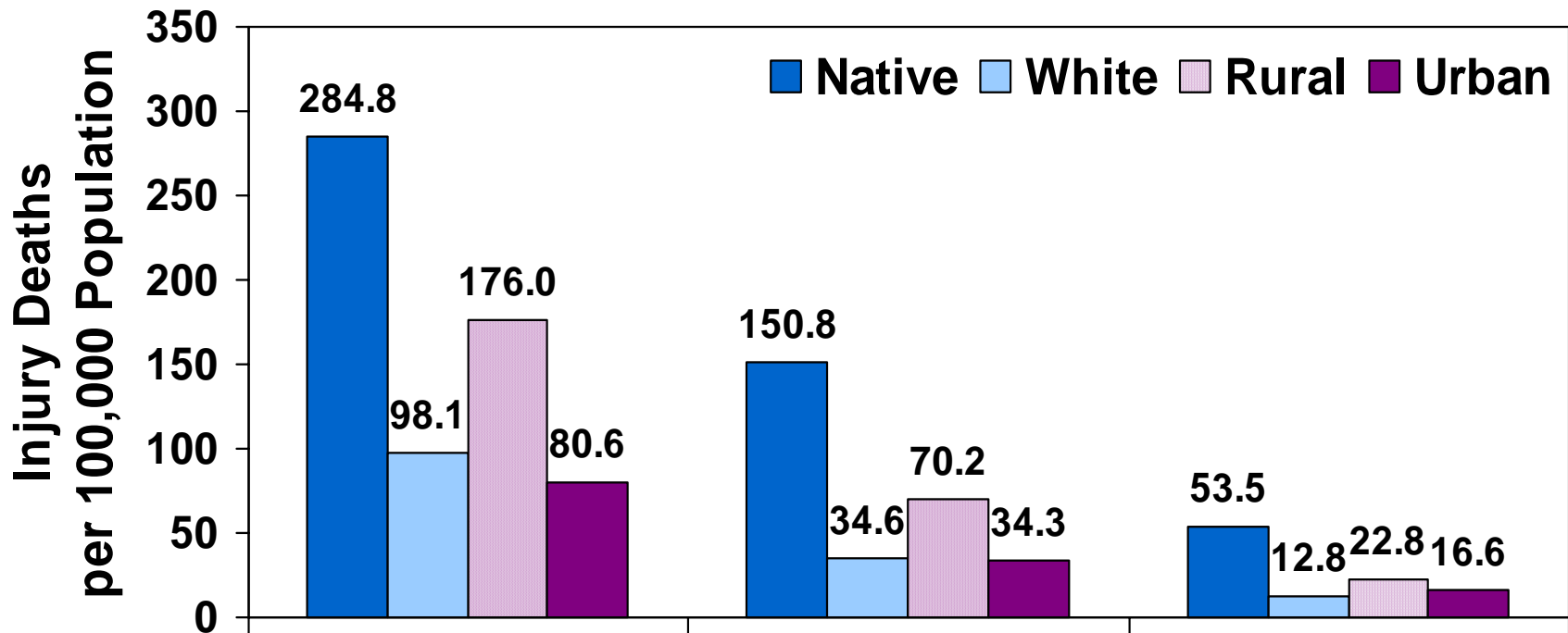
N:W RR = 3.1

R:U RR = 1.5

N:W RR = 4.3

R:U RR = 1.2

Racial and Regional Disparities in Injury Death Rates: *Men 20-44, 1981-2000*



N:W RR = 2.9

R:U RR = 2.2

N:W RR = 4.4

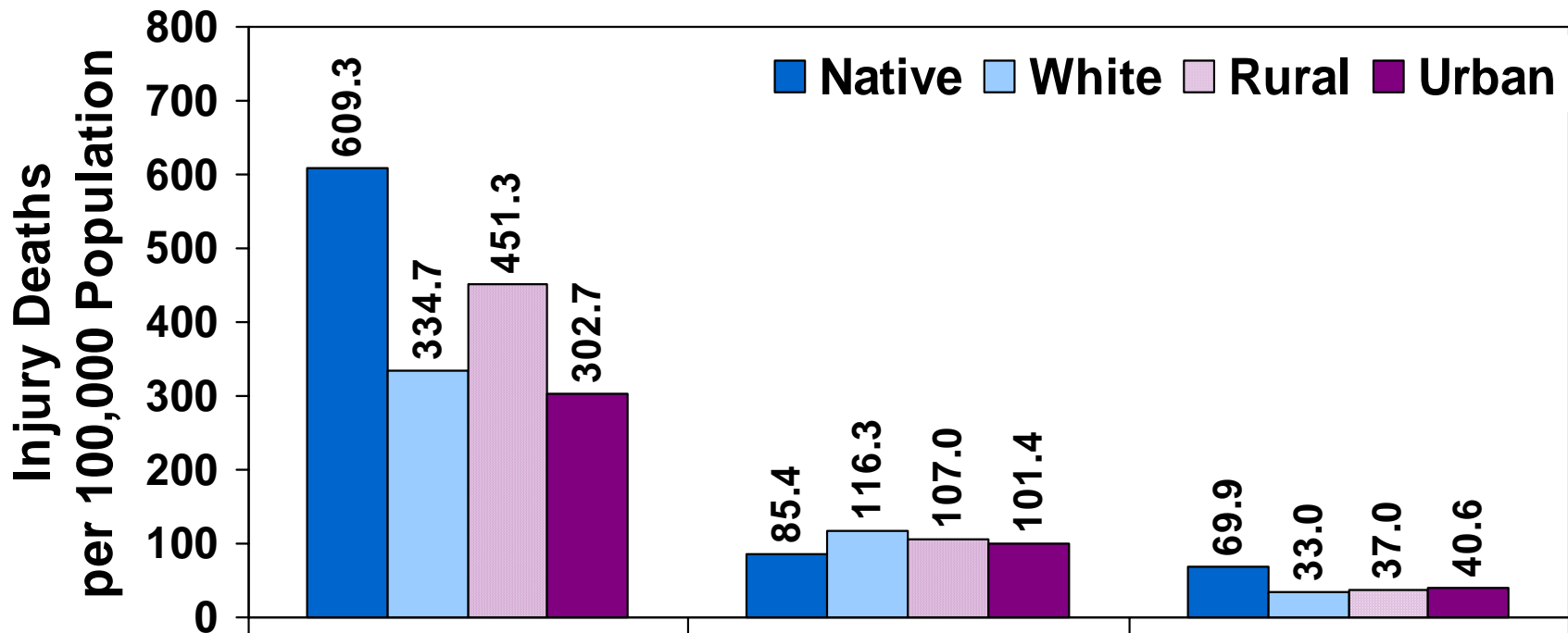
R:U RR = 2.1

N:W RR = 4.2

R:U RR = 1.4

Source: DHSS/ABVS

Racial and Regional Disparities in Injury Death Rates: *Adults 45+, 1981-2000*



unintentional

N:W RR = 1.8

R:U RR = 1.5

suicide

N:W RR = 0.7

R:U RR = 1.1

homicide

N:W RR = 2.1

R:U RR = 0.9

Source: DHSS/ABVS

Summary: Racial and Regional Disparities in Injury Death Rates

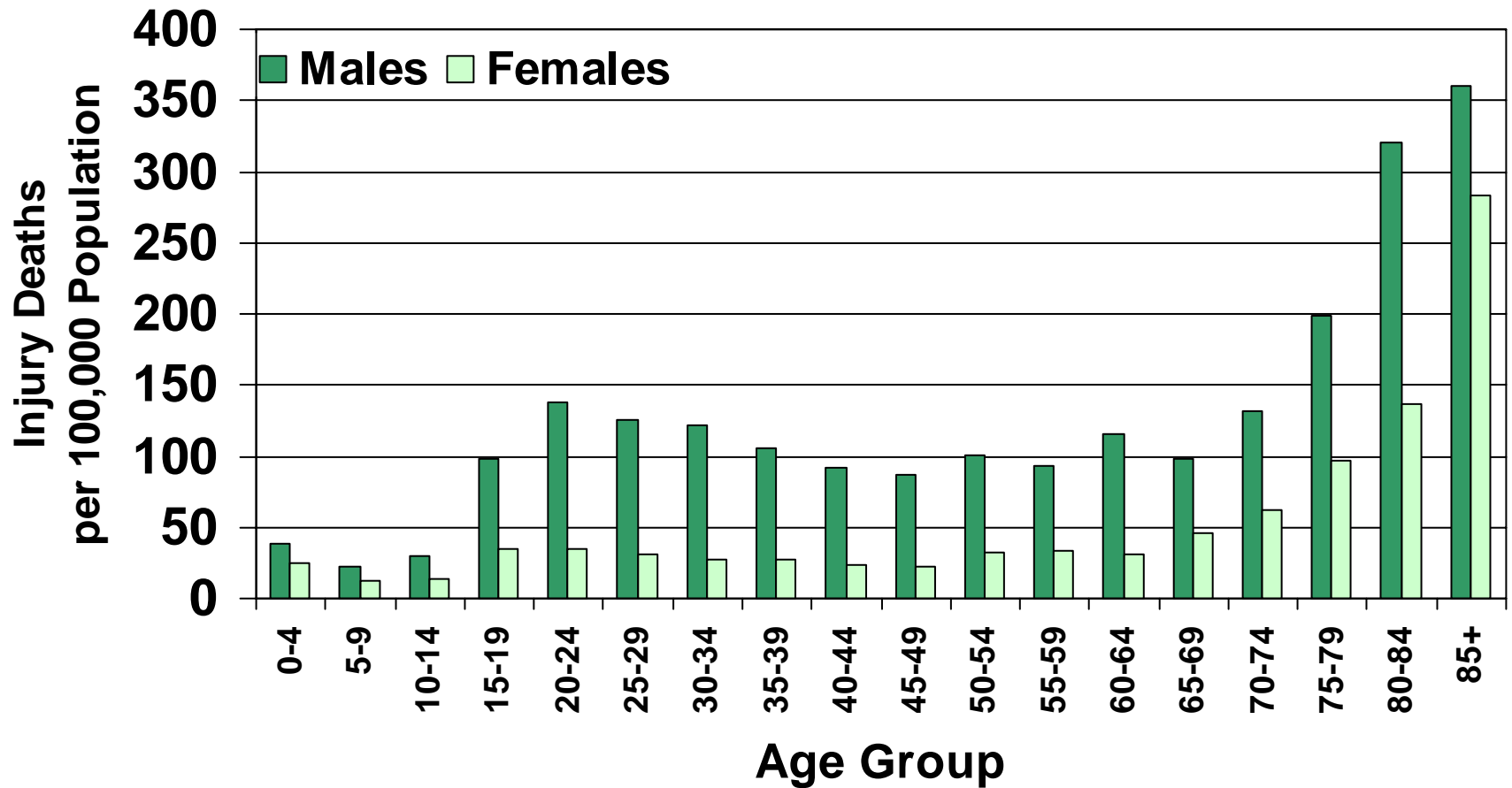
- ✓ Among youth 0-19, women 20-44 and men 20-44, Alaska Natives die from unintentional injuries, suicides, and homicides at rates two to five times greater than Whites.
- ✓ Among adults over age 44, Alaska Natives die from unintentional injuries and homicide at twice the rates for Whites.
- ✓ Regional (rural-to-urban) disparities also exist, but are somewhat smaller in magnitude.

Unintentional Injury Death Rates

Alaska, 1981-2000

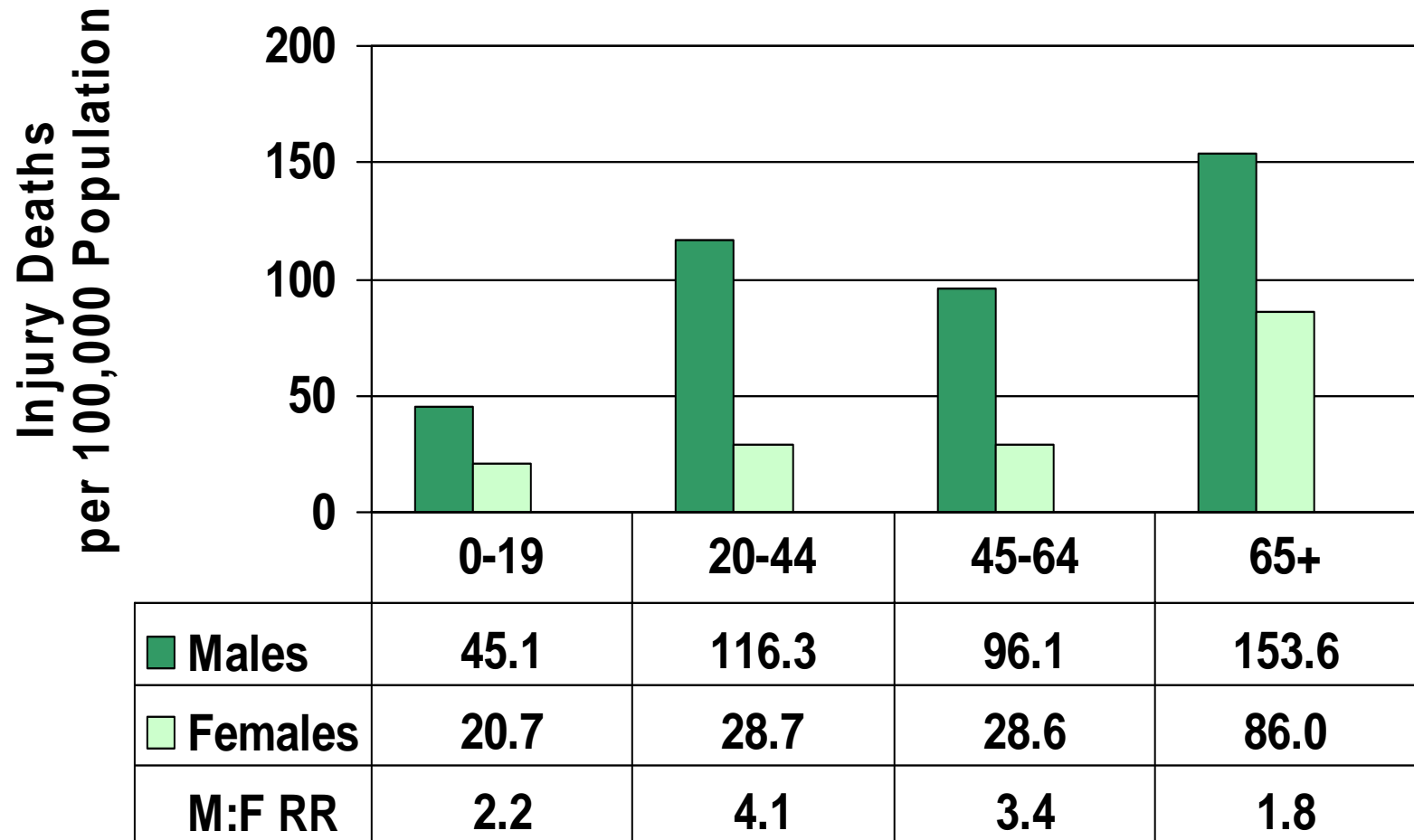
Age-Specific Rates by Sex, Race, and Region

Unintentional Injury Death Rate by Sex, 5-Year Age Groups, Alaska Residents, 1981-2000



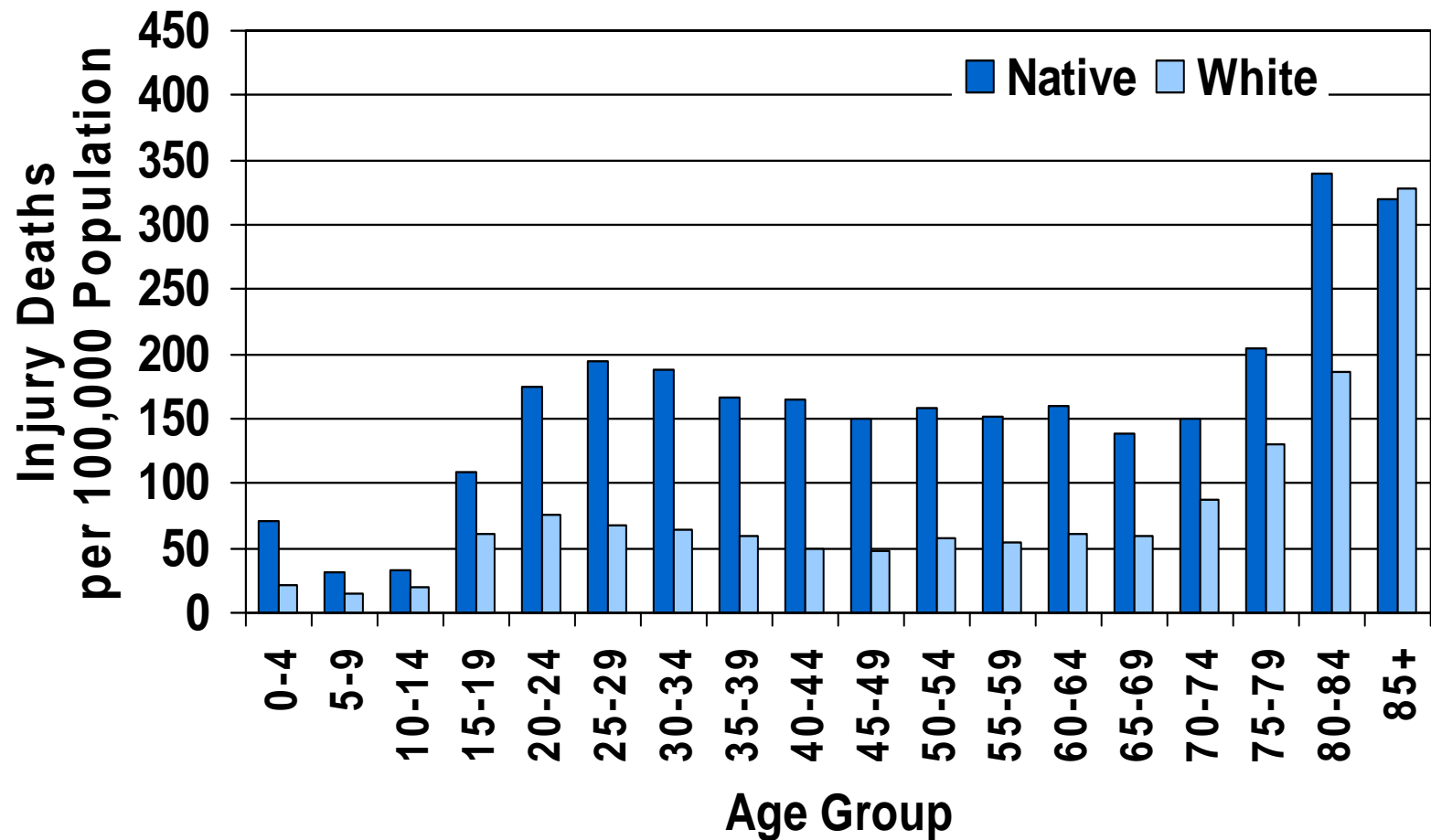
Source: DHSS/ABVS

Unintentional Injury Death Rate by Age and Sex Alaska Residents, 1981-2000

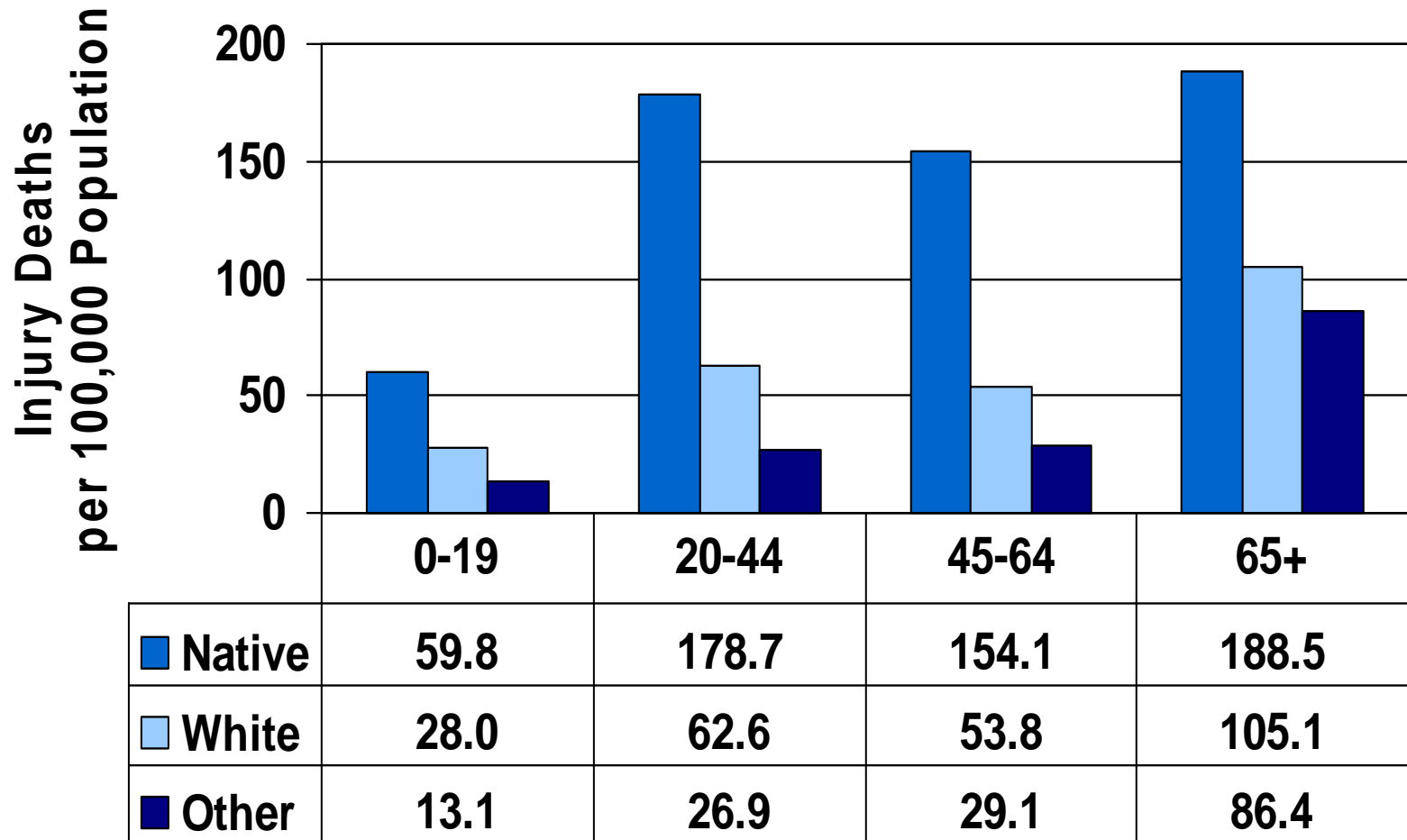


Source: DHSS/ABVS

Unintentional Injury Death Rate by Race, 5-Year Age Groups, Alaska Residents, 1981-2000

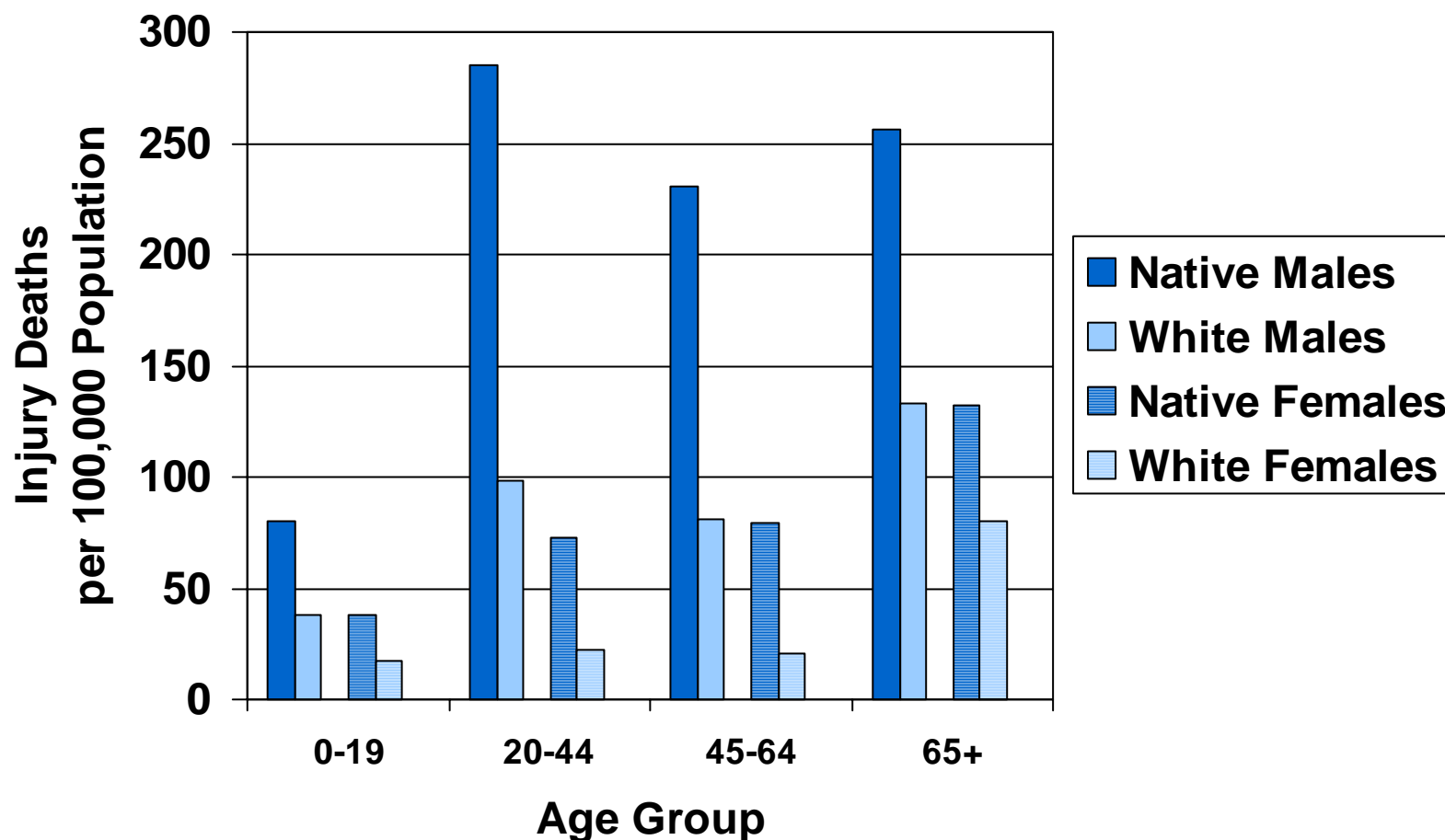


Unintentional Injury Death Rate by Age and Race Alaska Residents, 1981-2000



Source: DHSS/ABVS

Unintentional Injury Death Rate by Age, Sex, and Race (Graph) Alaska Residents, 1981-2000



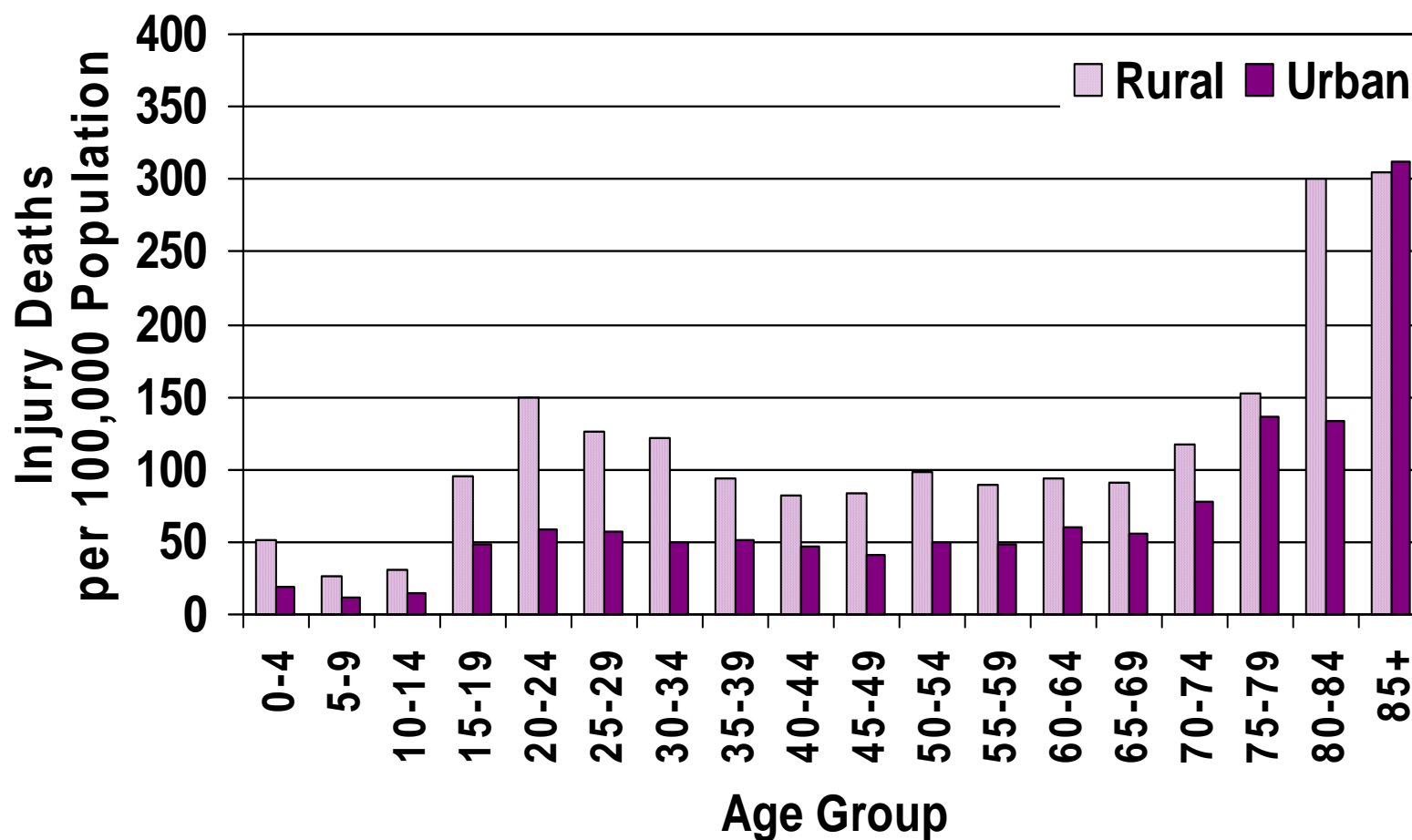
Source: DHSS/ABVS

Unintentional Injury Death Rate by Age, Sex, and Race (Data Table) Alaska Residents, 1981-2000

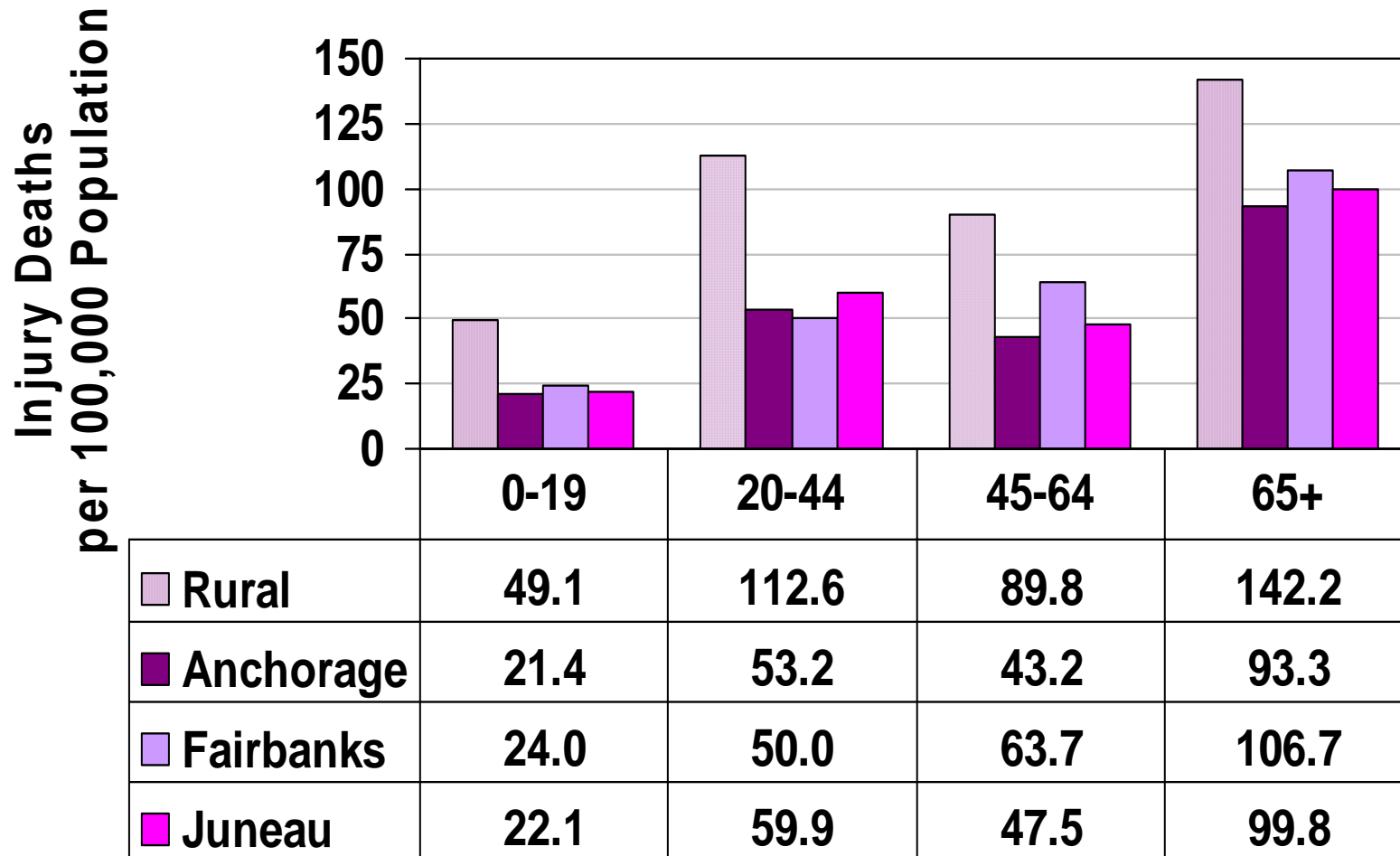
Sex	Age Group	Native		White		Rate Ratio (N:W)
		Count	Rate	Count	Rate	
Males						
	0-19	320	80.4	533	38.0	2.1
	20-44	922	284.8	2047	98.1	2.9
	45-64	263	230.8	672	81.0	2.8
	65+	98	255.8	225	132.7	1.9
Females						
	0-19	145	38.2	226	17.4	2.2
	20-44	237	72.9	415	22.5	3.2
	45-64	92	79.0	143	20.9	3.8
	65+	61	132.5	148	79.8	1.7

Source: DHSS/ABVS

Unintentional Injury Death Rate by Region of Residence, 5-Year Age Groups Alaska Residents, 1981-2000

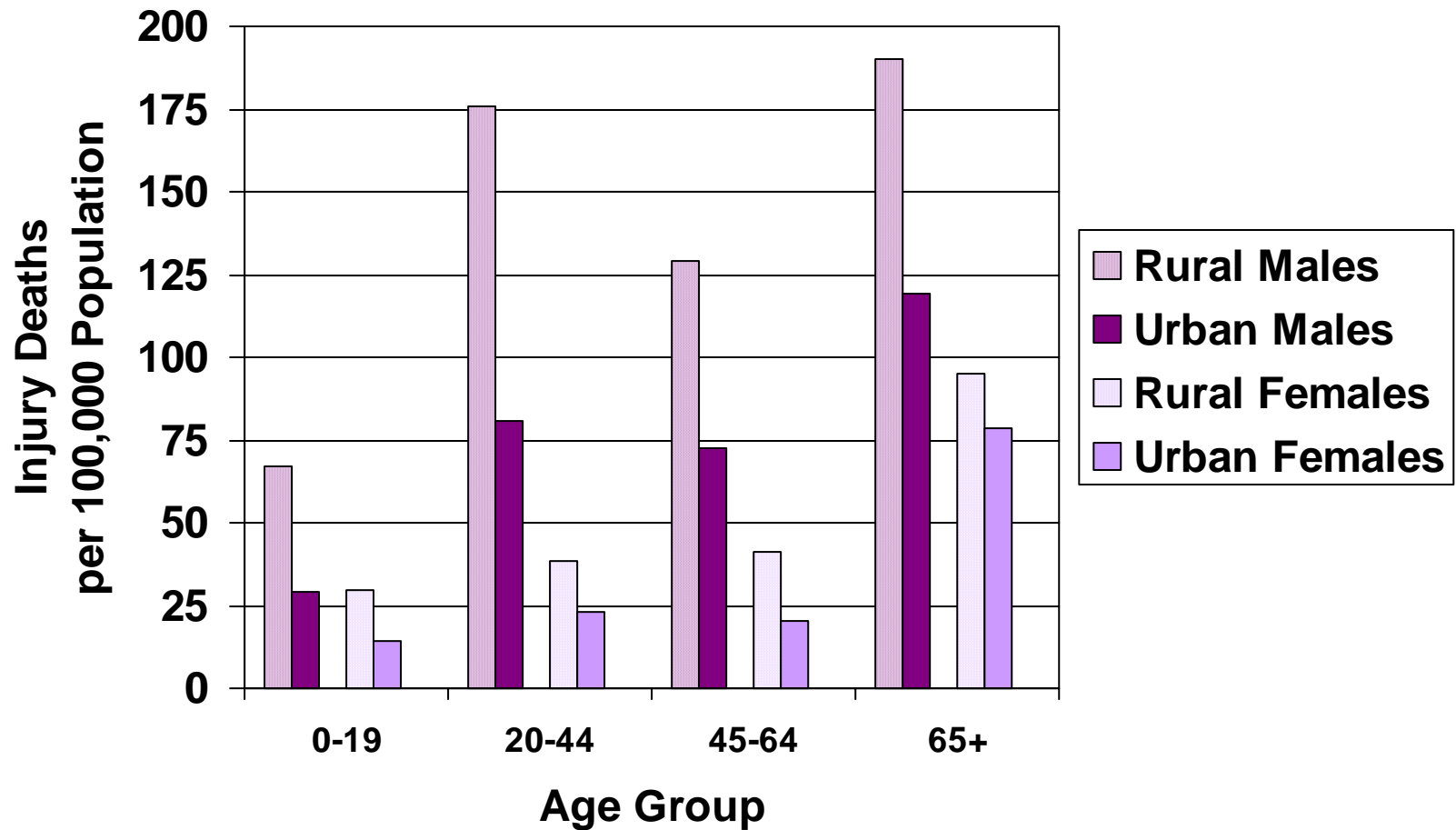


Unintentional Injury Death Rate by Age and Region of Residence Alaska Residents, 1981-2000



Source: DHSS/ABVS

Unintentional Injury Death Rate by Age, Sex and Region of Residence (Graph) Alaska Residents, 1981-2000



Source: DHSS/ABVS

Unintentional Injury Death Rate by Age, Sex and Region of Residence (Data Table) Alaska Residents, 1981-2000

Sex	Age Group	Rural		Urban		Rate Ratio (R:U)
		Count	Rate	Count	Rate	
Males						
	0-19	550	67.2	336	29.3	2.3
	20-44	1735	176.0	1327	80.6	2.2
	45-64	537	128.9	420	72.5	1.8
	65+	206	189.9	136	119.1	1.6
Females						
	0-19	228	29.8	155	14.3	2.1
	20-44	328	38.7	355	23.2	1.7
	45-64	139	41.3	108	20.5	2.0
	65+	105	95.2	112	78.8	1.2

Source: DHSS/ABVS

Summary: Unintentional Injury Death Rates

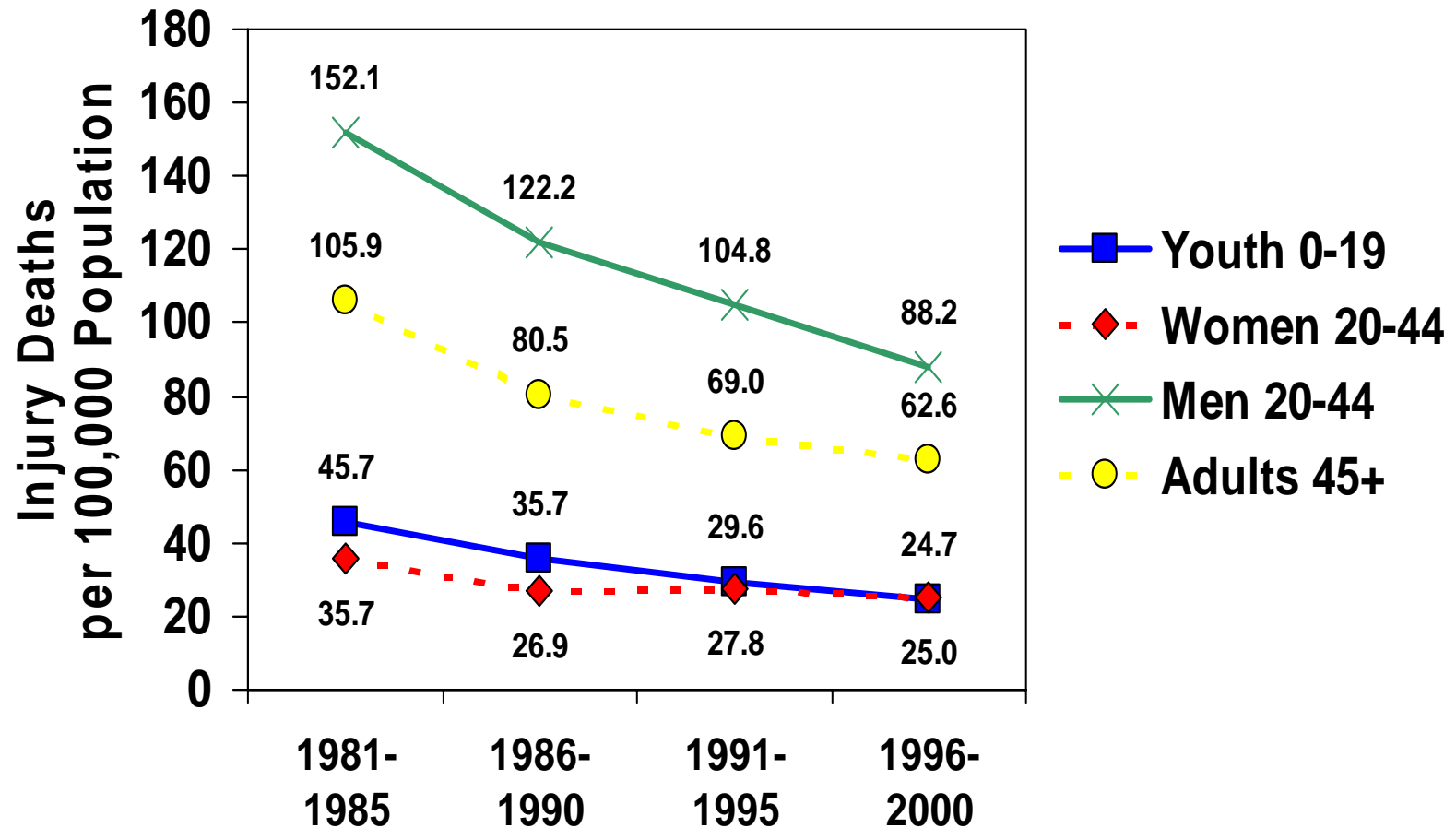
- ✓ In all age groups, men die from unintentional injuries at higher rates than same-aged women.
- ✓ Until age 85, the rate of unintentional injury death is higher for Alaska Natives than for Whites.
 - ✓ Among youth (0-19), Alaska Natives die from unintentional injuries at twice the rate of Whites.
 - ✓ Among women 20-44, Alaska Natives die from unintentional injuries at three times the rate of Whites.
- ✓ Until age 85, the rate of unintentional injury death for rural residents is higher than the rate for residents of Anchorage, Fairbanks, and Juneau.

Trends in Disparities among Unintentional Injury Death Rates

Alaska 1981-2000

Age-Specific Rates, Rate Ratios
and Rate Differences across 20 Years
with focus on Youth (0-19), Women and Men 20-44,
and Older Adults (45 and older)

Trends in Unintentional Injury Death Rates for Selected Groups: Alaska Residents, 1981-2000

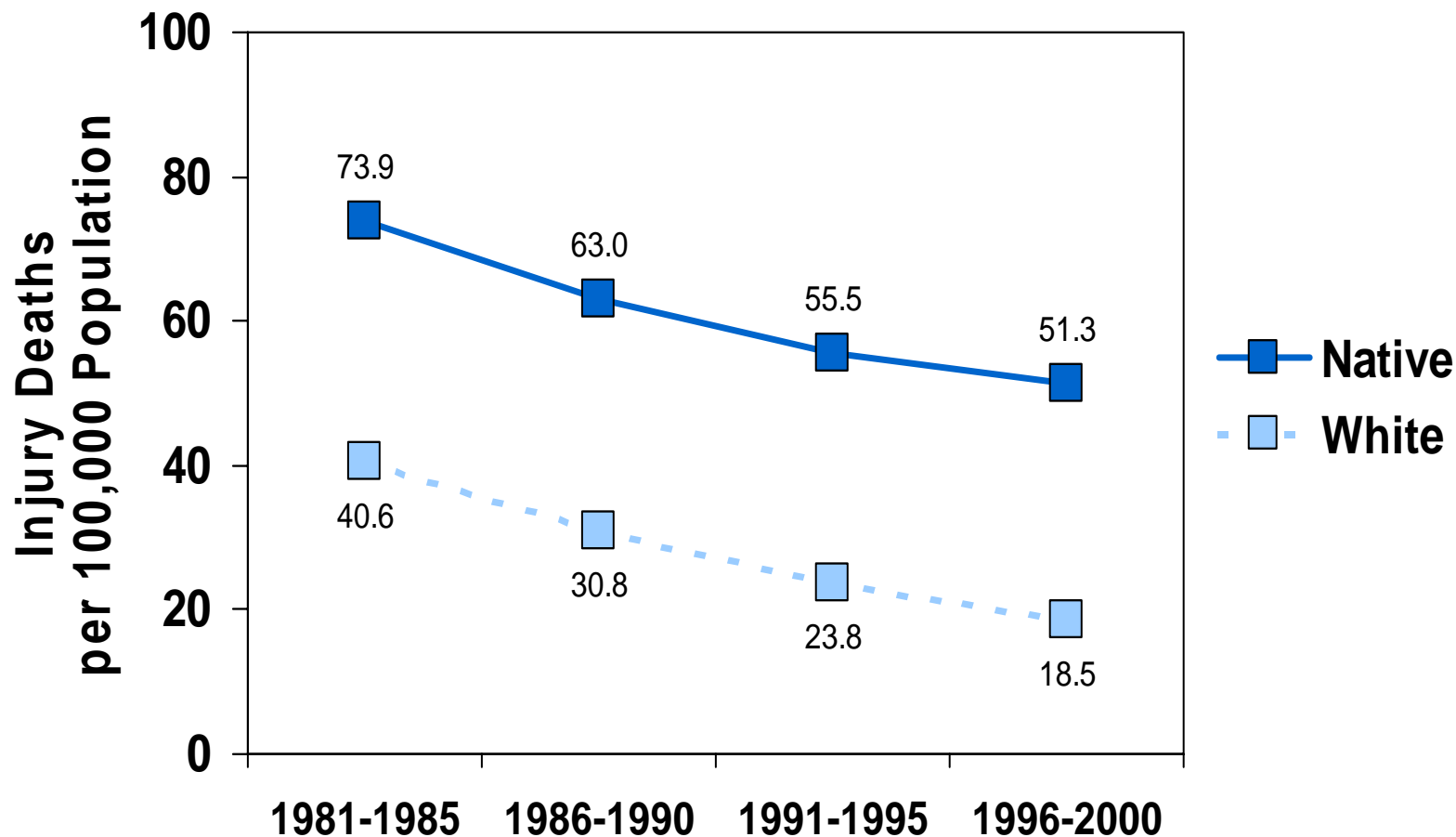


Source: DHSS/ABVS

Trends in Unintentional Injury Deaths and Death Rates for Selected Groups: Alaska Residents, 1981-2000

Years	Total	Youth 0-19	Women 20-44	Men 20-44	Adults 45+
<u>Deaths</u>					
1981-1985	1948	386	200	936	426
1986-1990	1717	325	166	833	393
1991-1995	1636	299	171	730	436
1996-2000	1476	259	146	563	508
<u>Death Rates</u>					
1981-1985	80.4	45.7	35.7	152.1	105.9
1986-1990	63.6	35.7	26.9	122.2	80.5
1991-1995	55.4	29.6	27.8	104.8	69.0
1996-2000	47.9	24.7	25.0	88.2	62.6

Trends in Unintentional Injury Death Rates: Racial Disparities among *Youth 0-19* Alaska Residents, 1981-2000

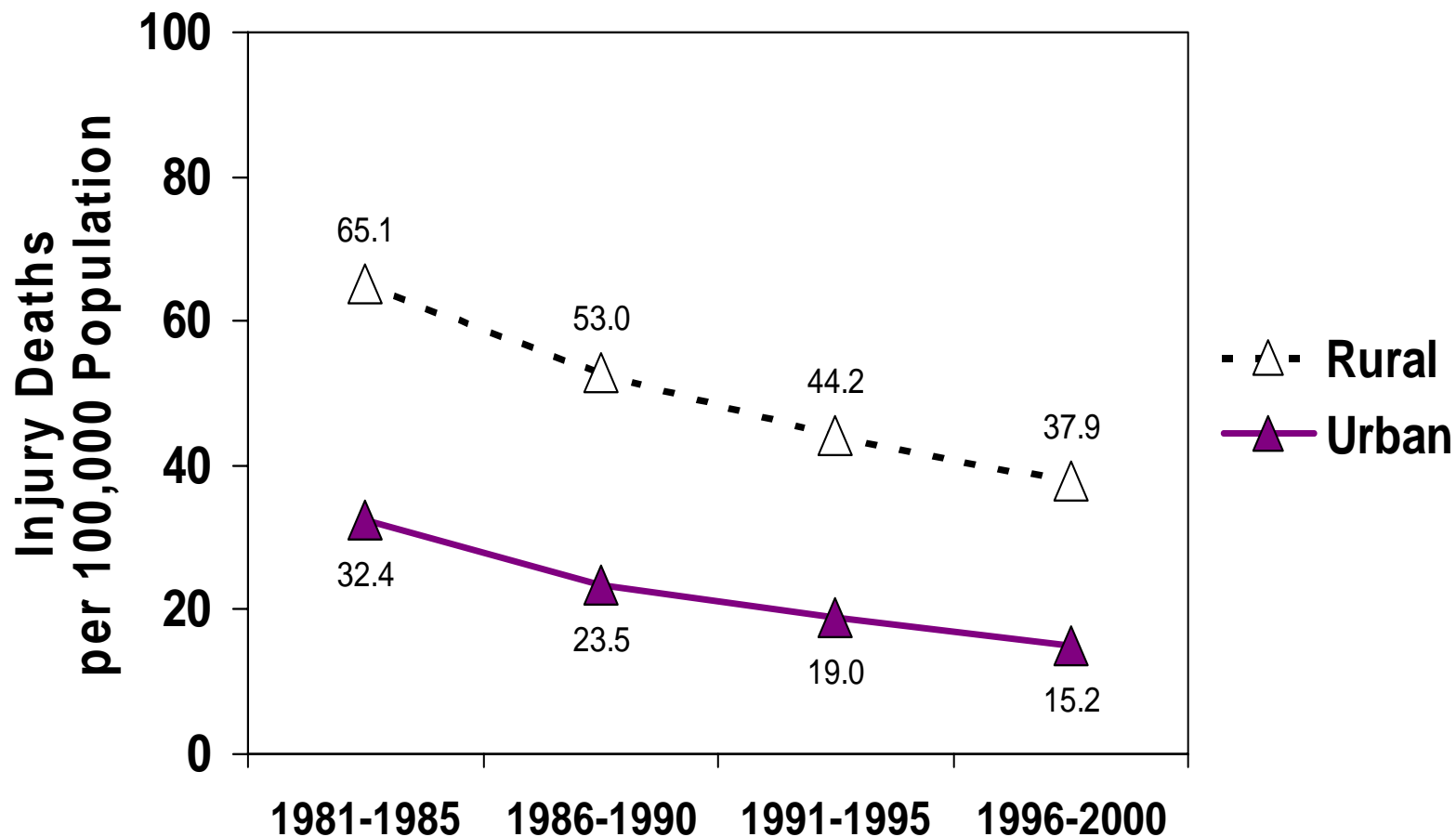


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: **Youth 0-19**, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	73.9	119	40.6	256	1.8	33.4
1986-1990	63.0	113	30.8	203	2.0	32.1
1991-1995	55.5	117	23.8	169	2.3	31.7
1996-2000	51.3	116	18.5	131	2.8	32.8

Trends in Unintentional Injury Death Rates: Regional Disparities among **Youth 0-19** Alaska Residents, 1981-2000

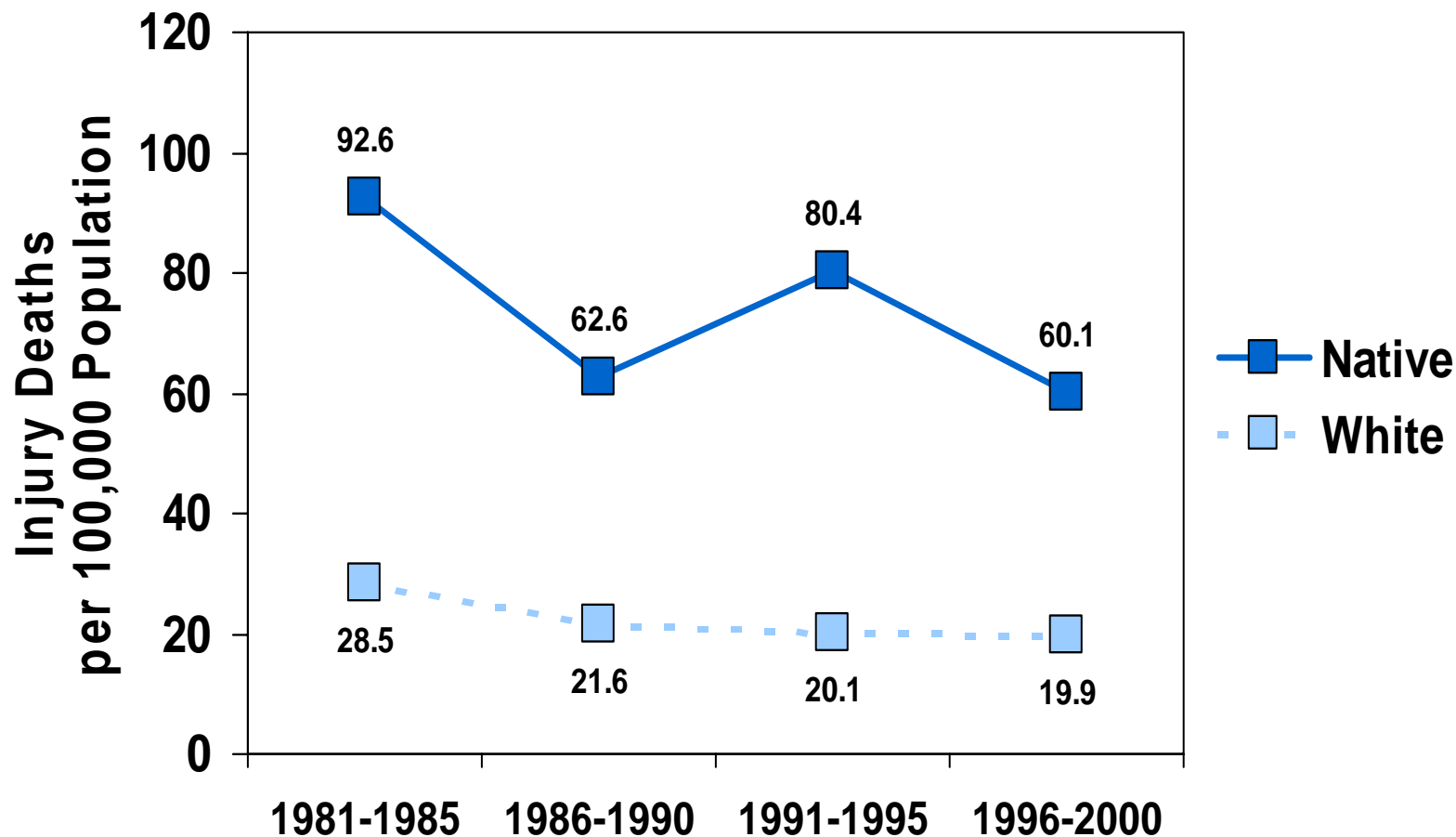


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural:Urban Rate Differences: ***Youth 0-19***, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	65.1	224	32.4	162	2.0	32.8
1986-1990	53.0	200	23.5	125	2.3	29.5
1991-1995	44.2	187	19.0	112	2.3	25.2
1996-2000	37.9	167	15.2	92	2.5	22.8

Trends in Unintentional Injury Death Rates: Racial Disparities among ***Women 20-44*** Alaska Residents, 1981-2000

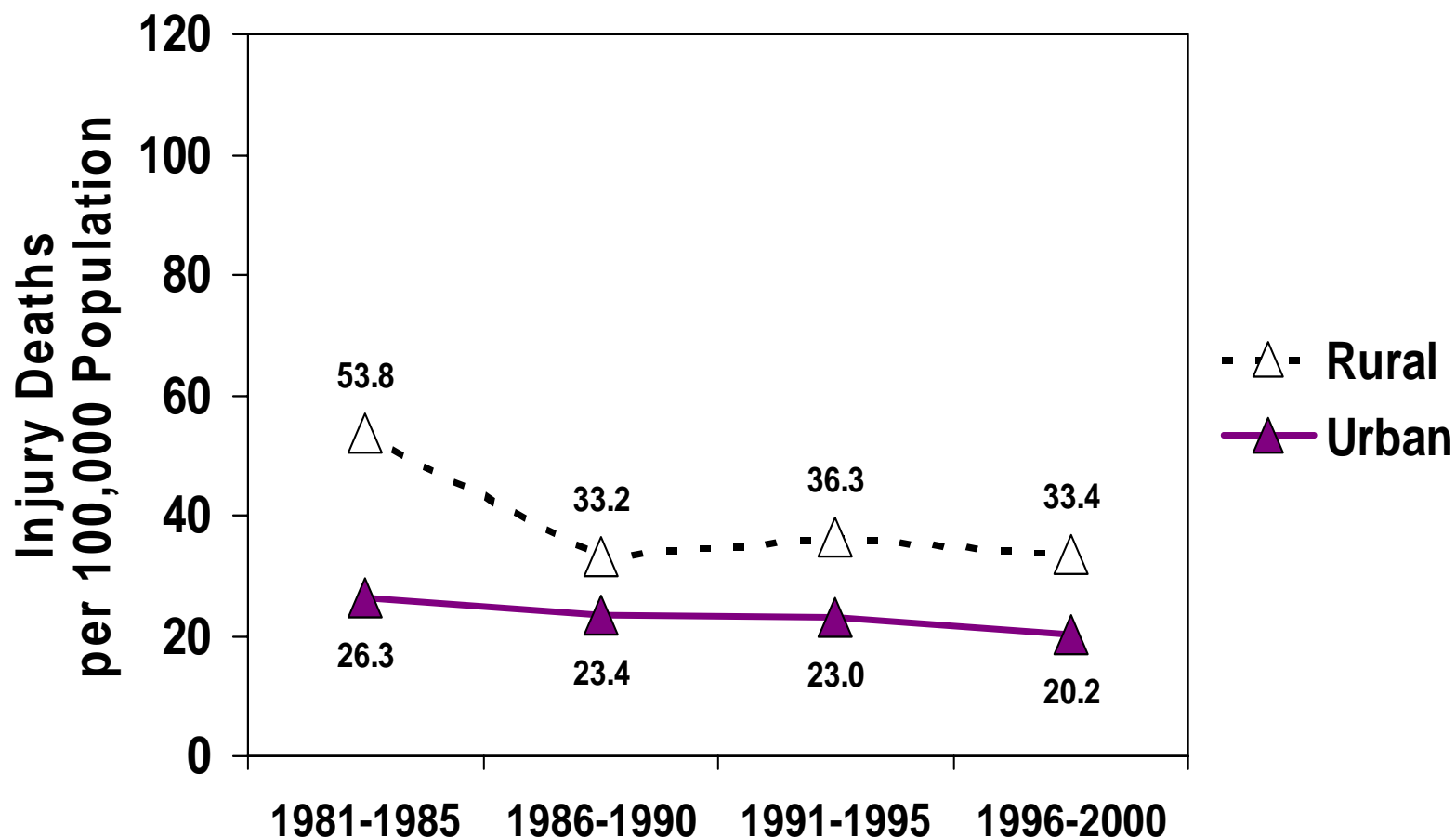


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Women 20-44, 1981-2000***

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	92.6	63	28.5	129	3.3	64.1
1986-1990	62.6	50	21.6	105	2.9	41.0
1991-1995	80.4	70	20.1	95	4.0	60.4
1996-2000	60.1	54	19.9	86	3.0	40.2

Trends in Unintentional Injury Death Rates: Regional Disparities among **Women 20-44** Alaska Residents, 1981-2000

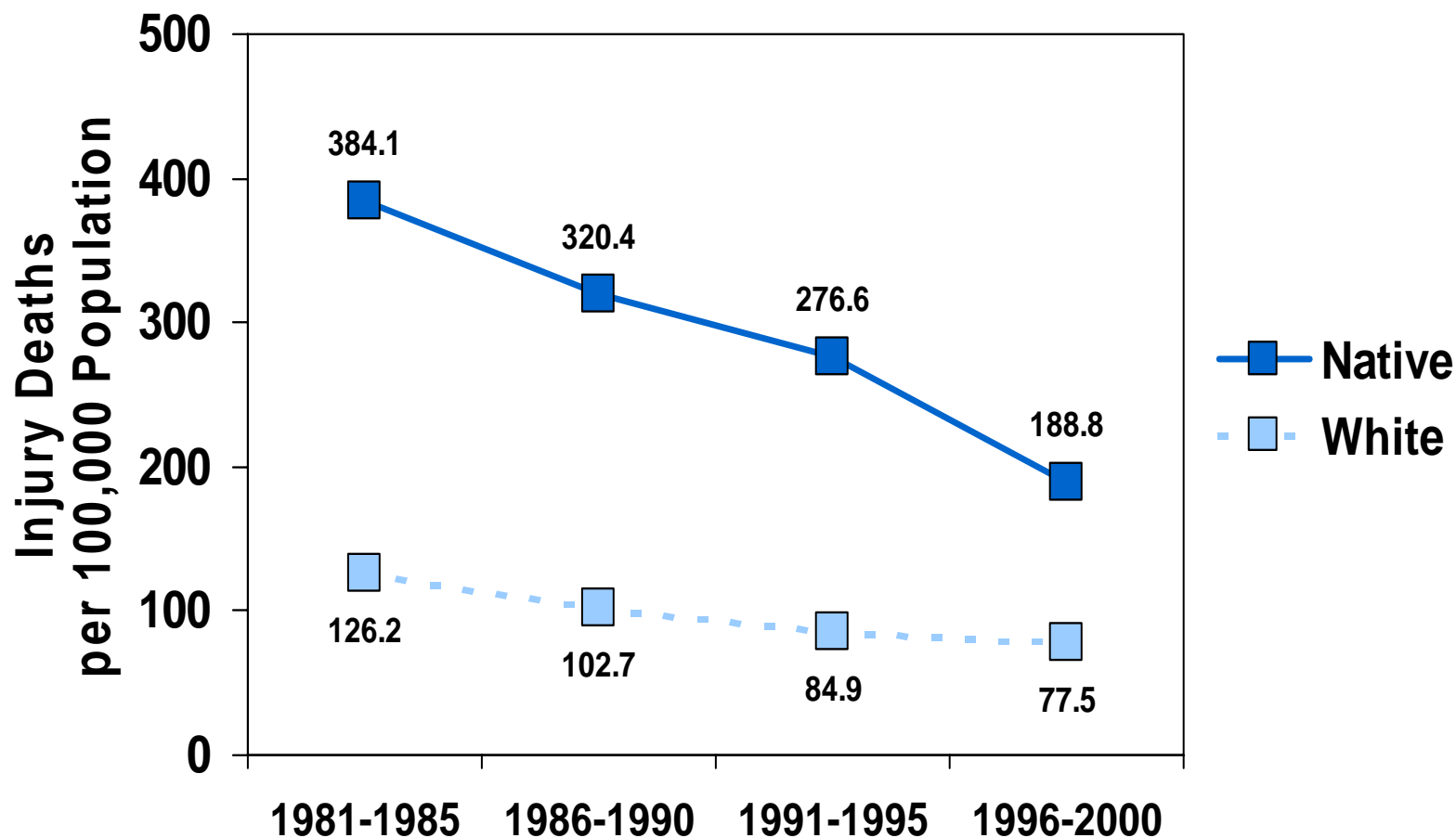


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Women 20-44, 1981-2000***

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	53.8	103	26.3	97	2.0	27.5
1986-1990	33.2	73	23.4	93	1.4	9.9
1991-1995	36.3	81	23.0	90	1.6	13.3
1996-2000	33.4	71	20.2	75	1.7	13.2

Trends in Unintentional Injury Death Rates: Racial Disparities among ***Men 20-44*** Alaska Residents, 1981-2000

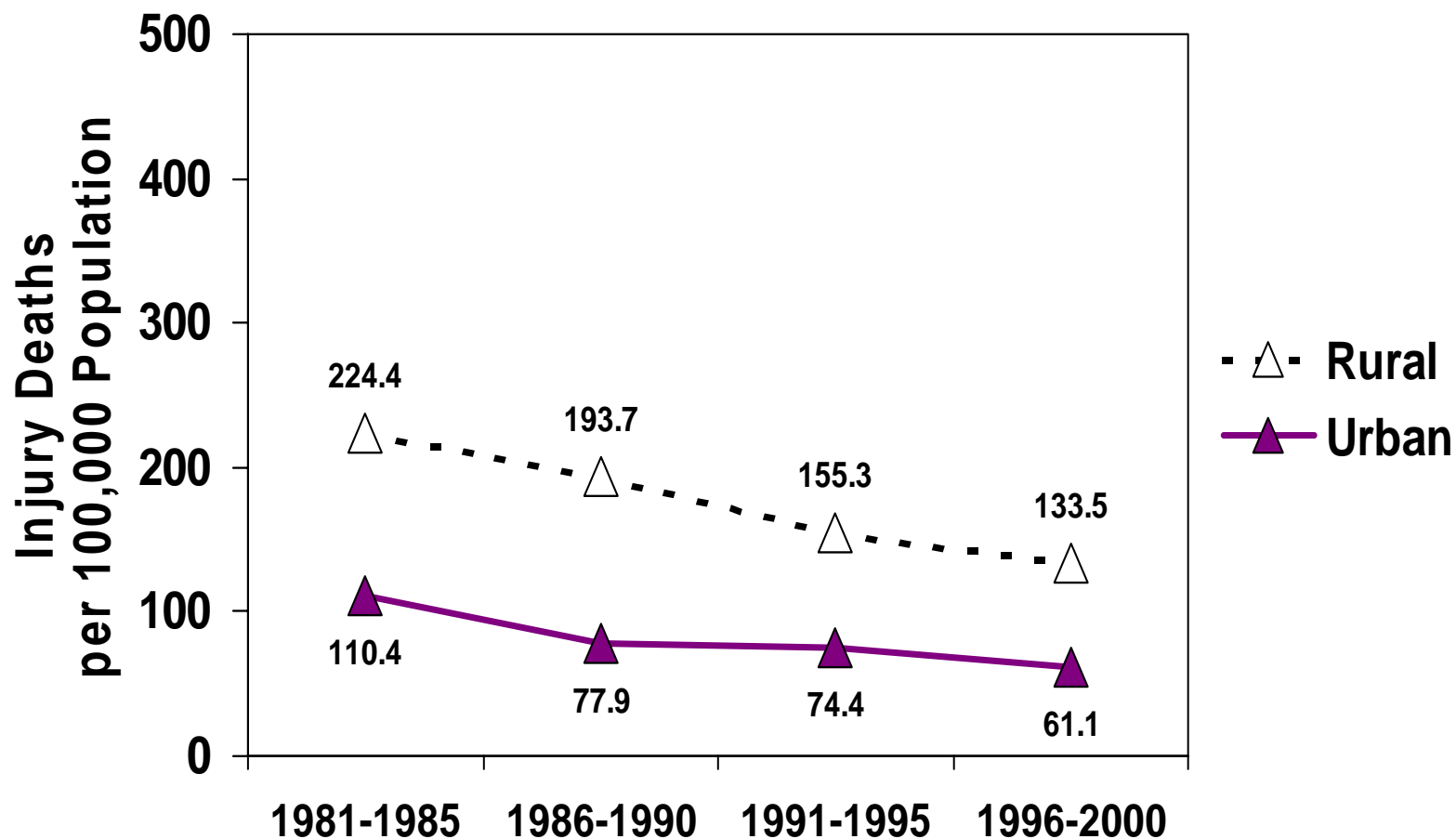


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Men 20-44, 1981-2000***

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	384.1	257	126.2	653	3.0	257.9
1986-1990	320.4	251	102.7	561	3.1	217.7
1991-1995	276.6	243	84.9	463	3.3	191.7
1996-2000	188.8	171	77.5	370	2.4	111.2

Trends in Unintentional Injury Death Rates: Regional Disparities among ***Men 20-44*** Alaska Residents, 1981-2000

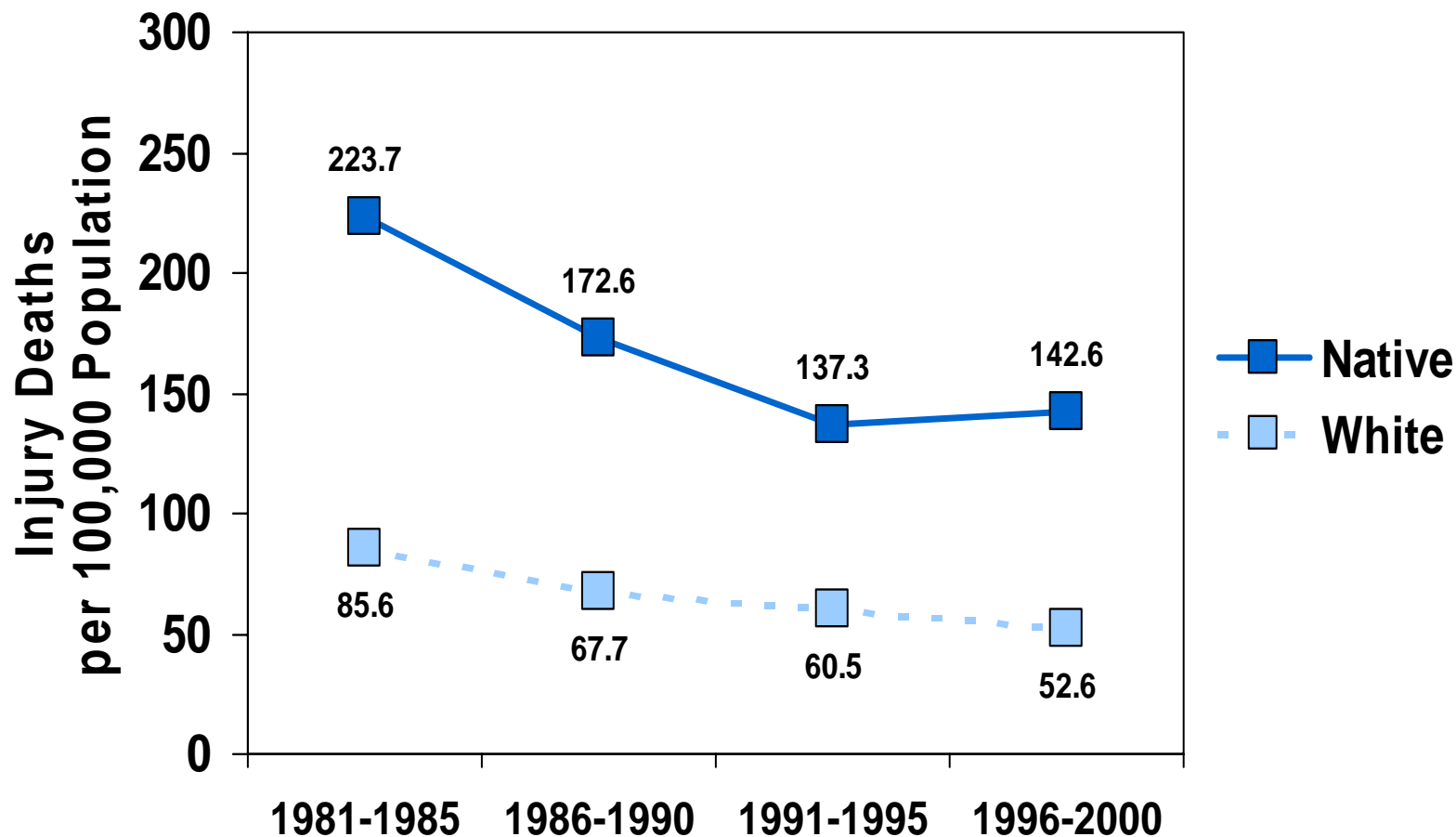


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Men 20-44, 1981-2000***

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	224.4	505	110.4	431	2.0	114.0
1986-1990	193.7	505	77.9	328	2.5	115.9
1991-1995	155.3	406	74.4	324	2.1	80.9
1996-2000	133.5	319	61.1	244	2.2	72.5

Trends in Unintentional Injury Death Rates: Racial Disparities among **Adults 45+** Alaska Residents, 1981-2000

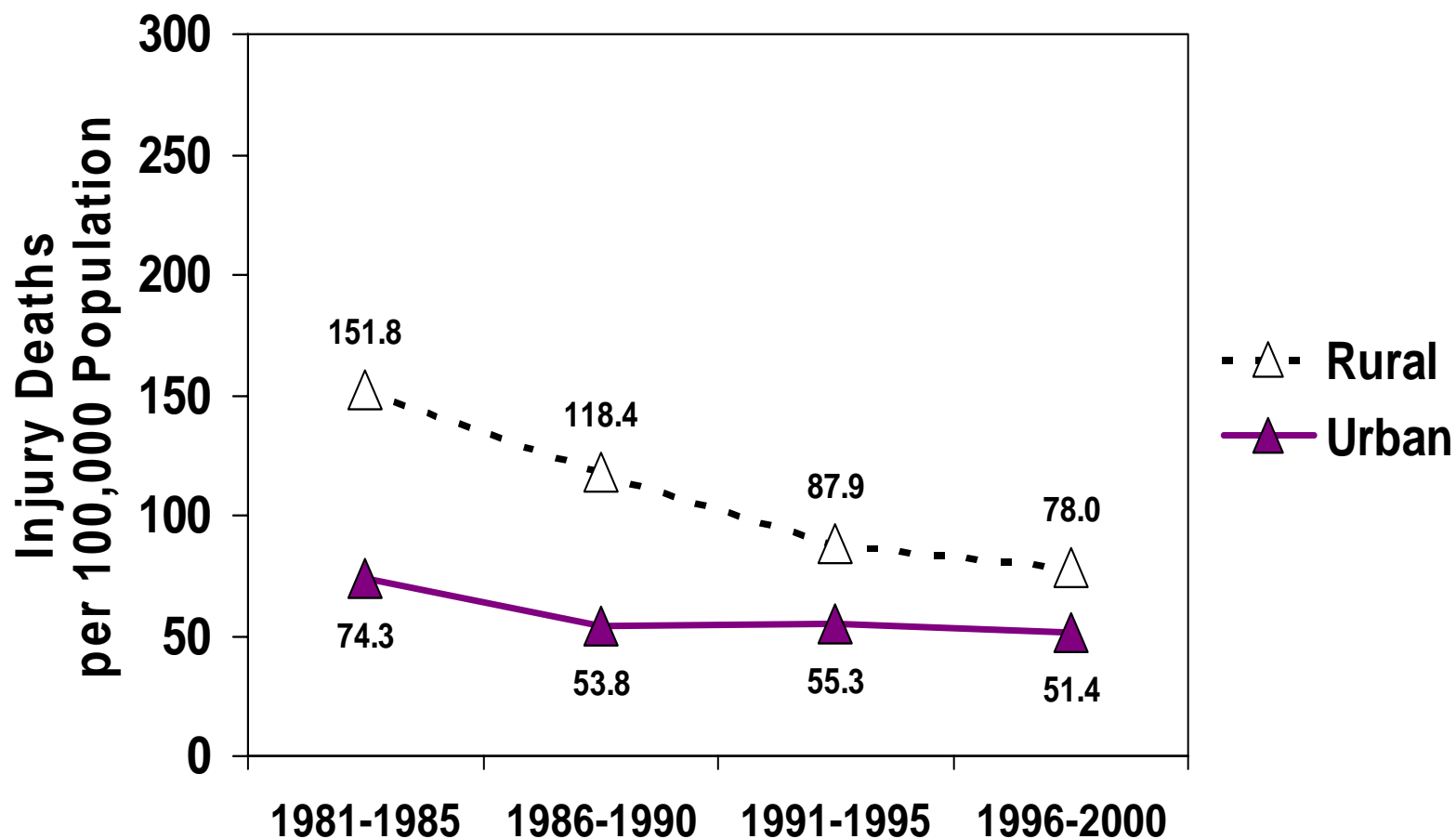


Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Adults 45+, 1981-2000***

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	223.7	135	85.6	274	2.6	138.1
1986-1990	172.6	119	67.7	264	2.6	105.0
1991-1995	137.3	115	60.5	308	2.3	76.8
1996-2000	142.6	145	52.6	342	2.7	90.0

Trends in Unintentional Injury Death Rates: Regional Disparities among **Adults 45+** Alaska Residents, 1981-2000



Source: DHSS/ABVS

Unintentional Injury Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Adults 45+, 1981-2000***

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	151.8	249	74.3	177	2.0	77.5
1986-1990	118.4	239	53.8	154	2.2	64.6
1991-1995	87.9	233	55.3	203	1.6	32.6
1996-2000	78.0	266	51.4	242	1.5	26.6

Summary: Trends in Unintentional Injury Disparities

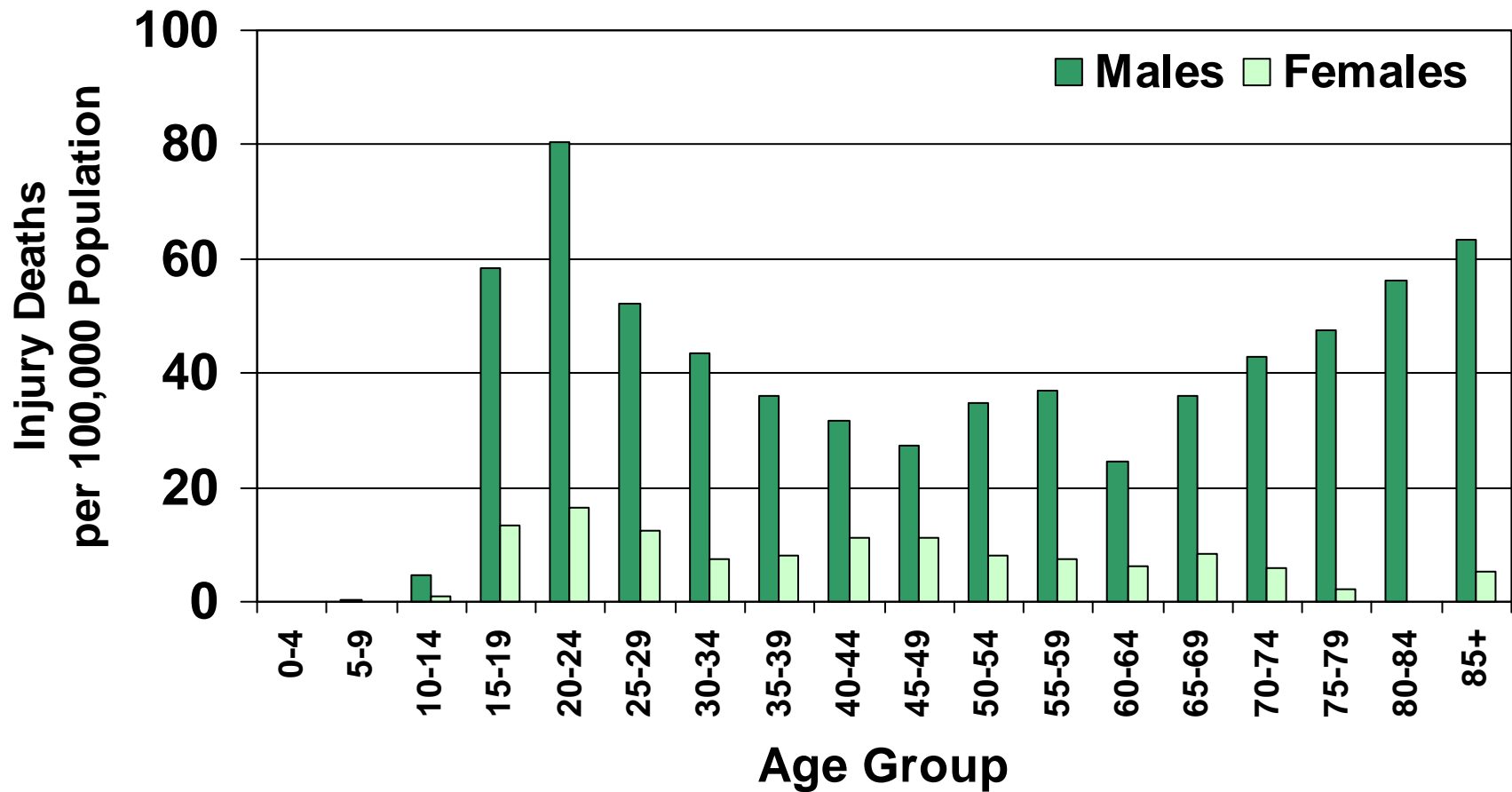
- ✓ Death rates for all unintentional injuries combined have been steadily decreasing over the past 20 years, in all 4 age-sex groups.
- ✓ Racial disparities have persisted among those aged 0-19, women 20-44, and adults over 44. There has been a slight decrease in the racial disparity among men 20-44.
- ✓ Regional disparities, somewhat smaller than the racial disparities, have also largely persisted over the past 20 years. The regional disparity among those 45 and older has decreased somewhat.

Suicide Rates

Alaska, 1981-2000

Age-Specific Rates by Sex, Race, and Region

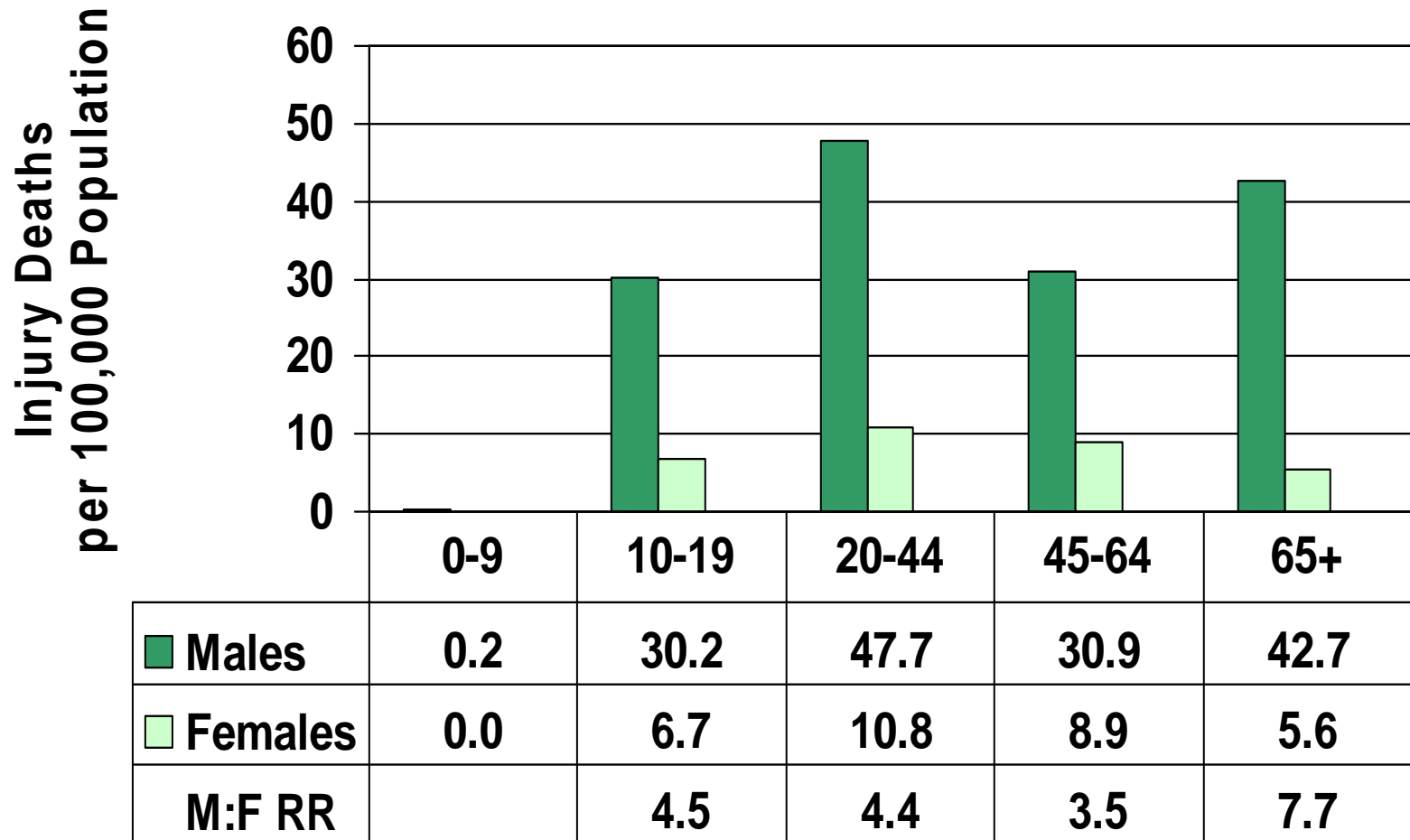
Suicide Rate by Sex, 5-Year Age Groups Alaska Residents, 1981-2000



Source: DHSS/ABVS

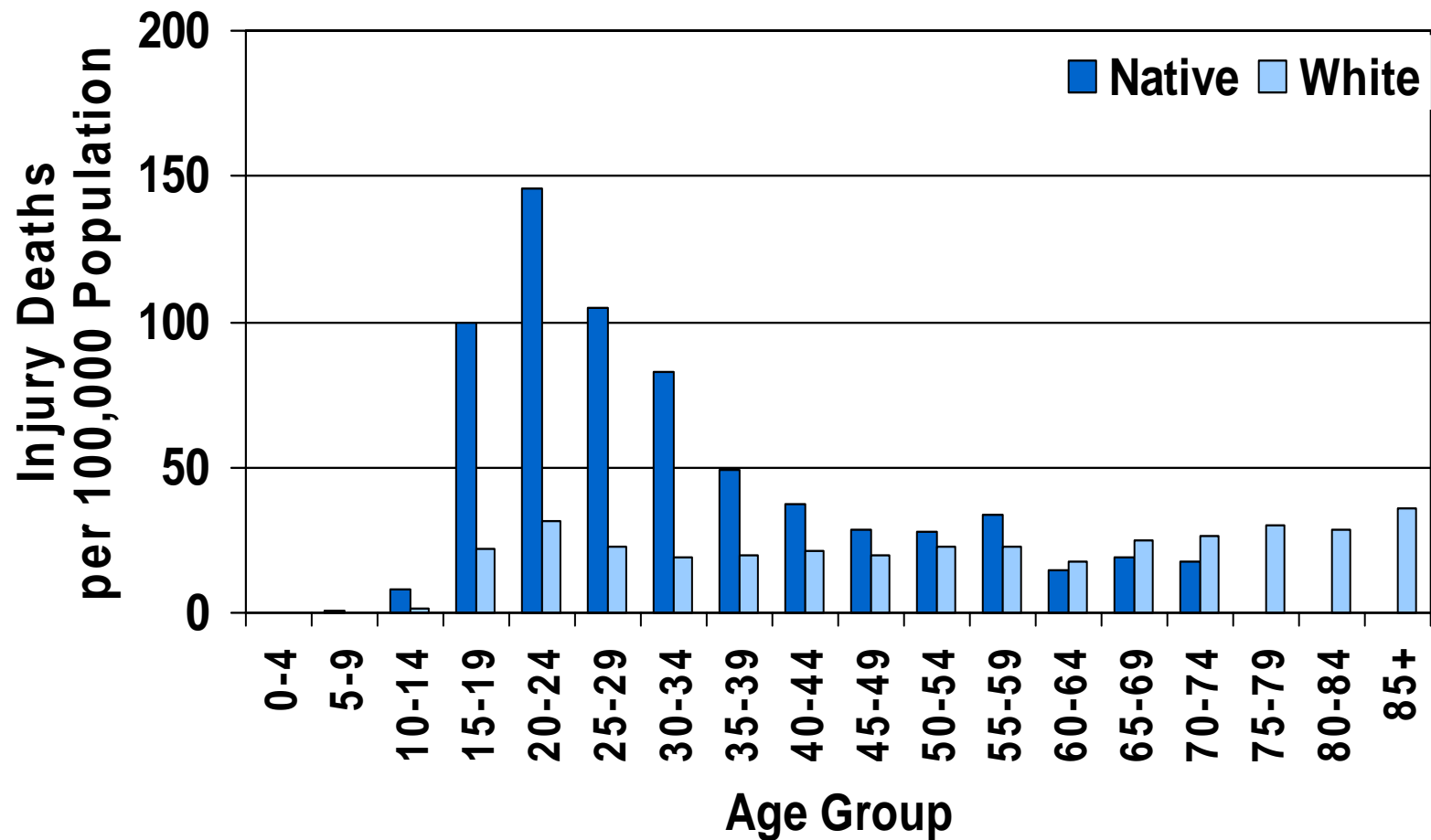
Suicide Rate by Age and Sex

Alaska Residents, 1981-2000



Source: DHSS/ABVS

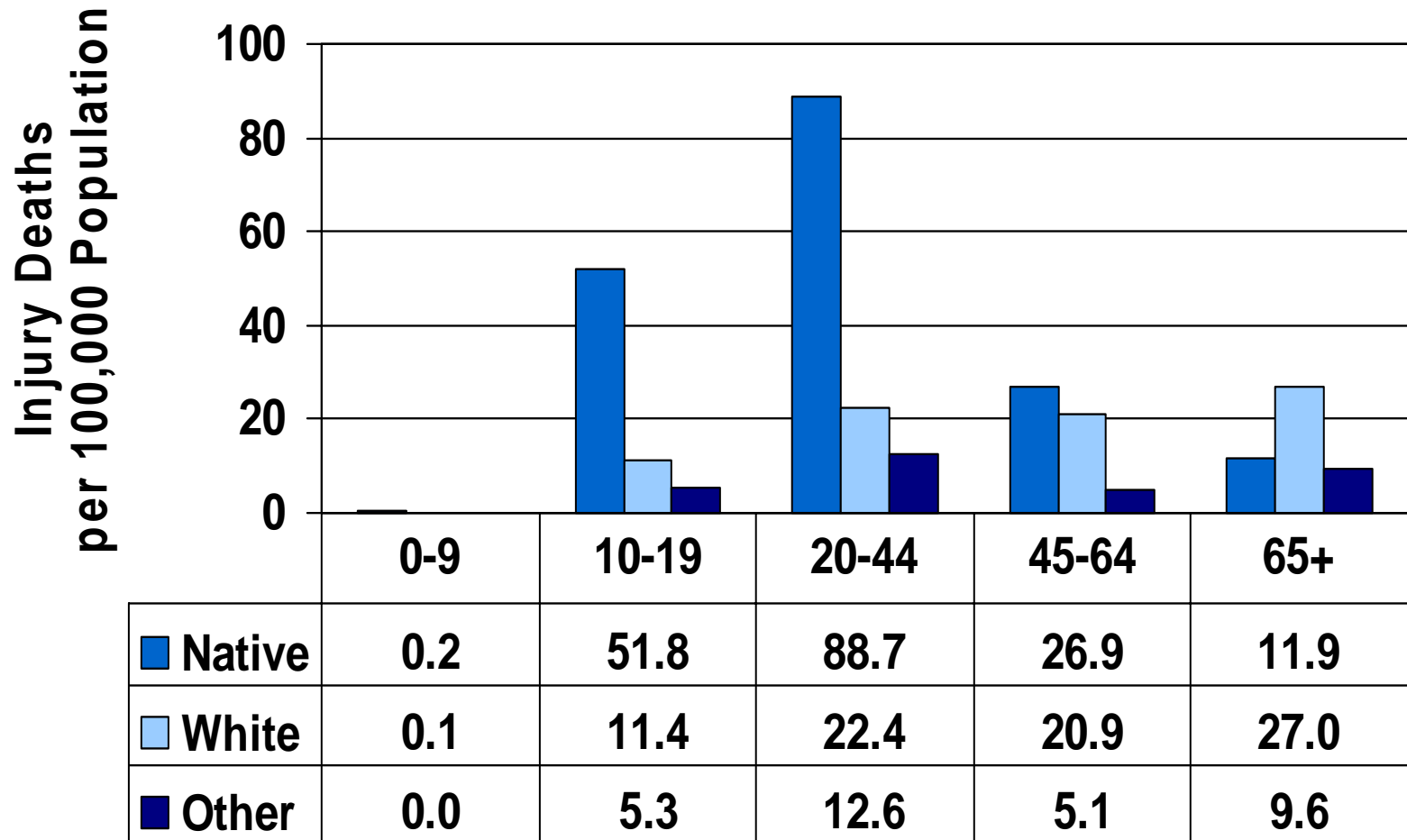
Suicide Rate by Race, 5-Year Age Groups Alaska Residents, 1981-2000



Source: DHSS/ABVS

Suicide Rate by Age and Race

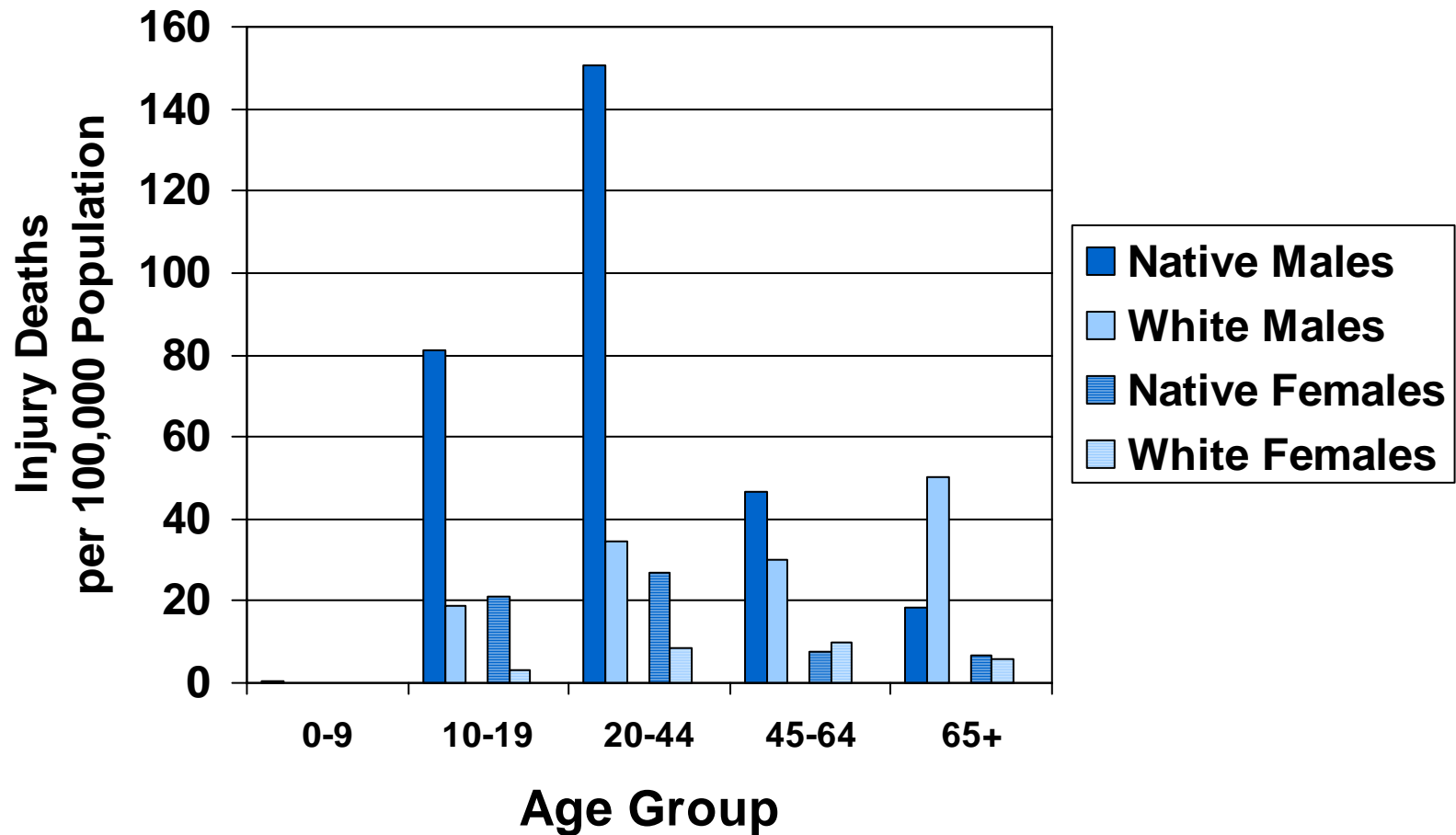
Alaska Residents, 1981-2000



Source: DHSS/ABVS

Suicide Rate by Age, Sex, and Race (Graph)

Alaska Residents, 1981-2000



Source: DHSS/ABVS

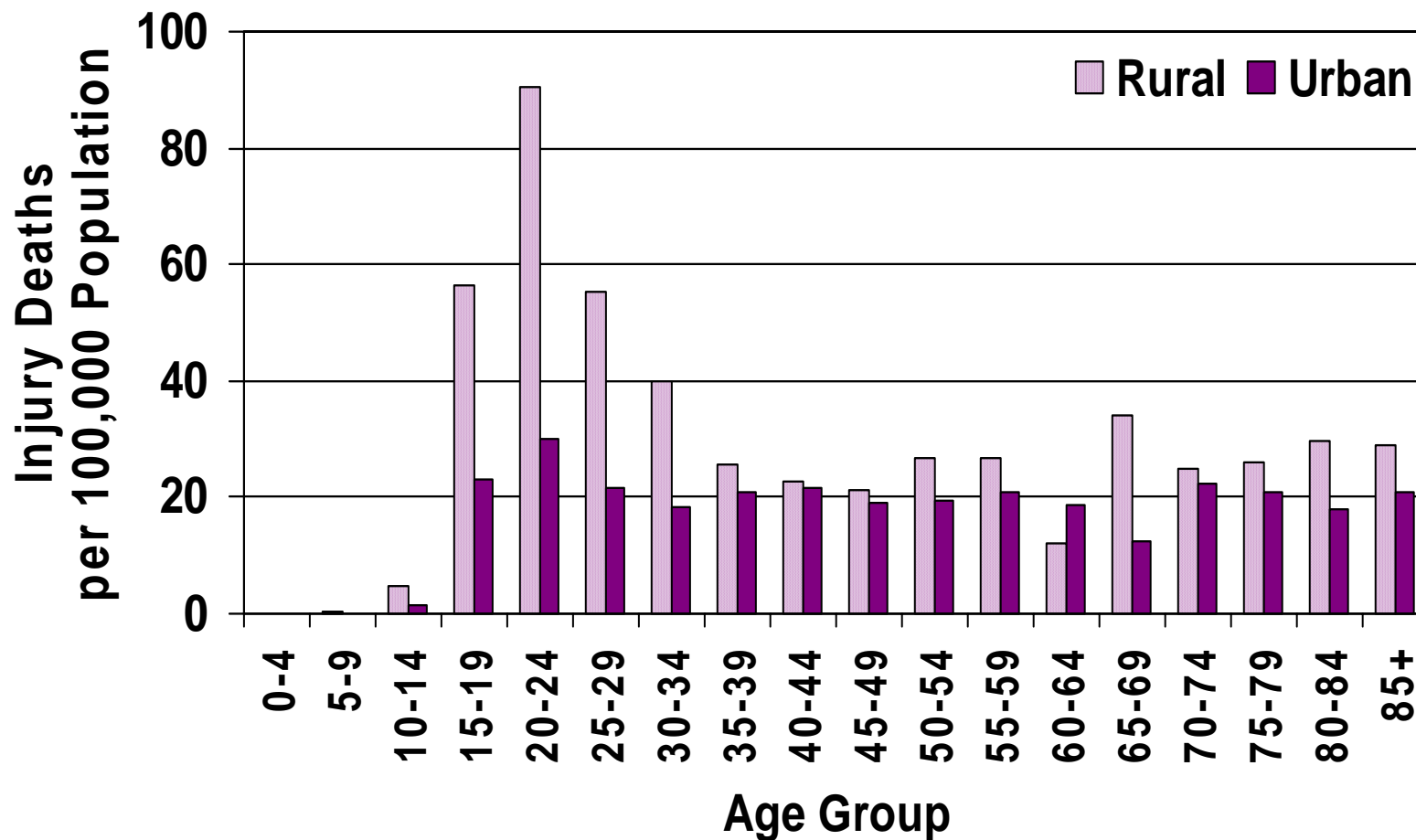
Suicide Rate by Age, Sex, and Race (Data Table)

Alaska Residents, 1981-2000

Sex	Age Group	Native		White		Rate Ratio (N:W)
		Count	Rate	Count	Rate	
Males						
	0-9	1	0.5	1	0.1	3.5
	10-19	142	81.2	122	18.8	4.3
	20-44	488	150.8	721	34.6	4.4
	45-64	53	46.5	250	30.1	1.5
	65+	7	18.3	85	50.2	0.4
Females						
	0-9	0	0.0	0	0.0	
	10-19	35	21.0	20	3.4	6.3
	20-44	87	26.8	159	8.6	3.1
	45-64	9	7.7	67	9.8	0.8
	65+	3	6.5	11	5.9	1.1

Source: DHSS/ABVS

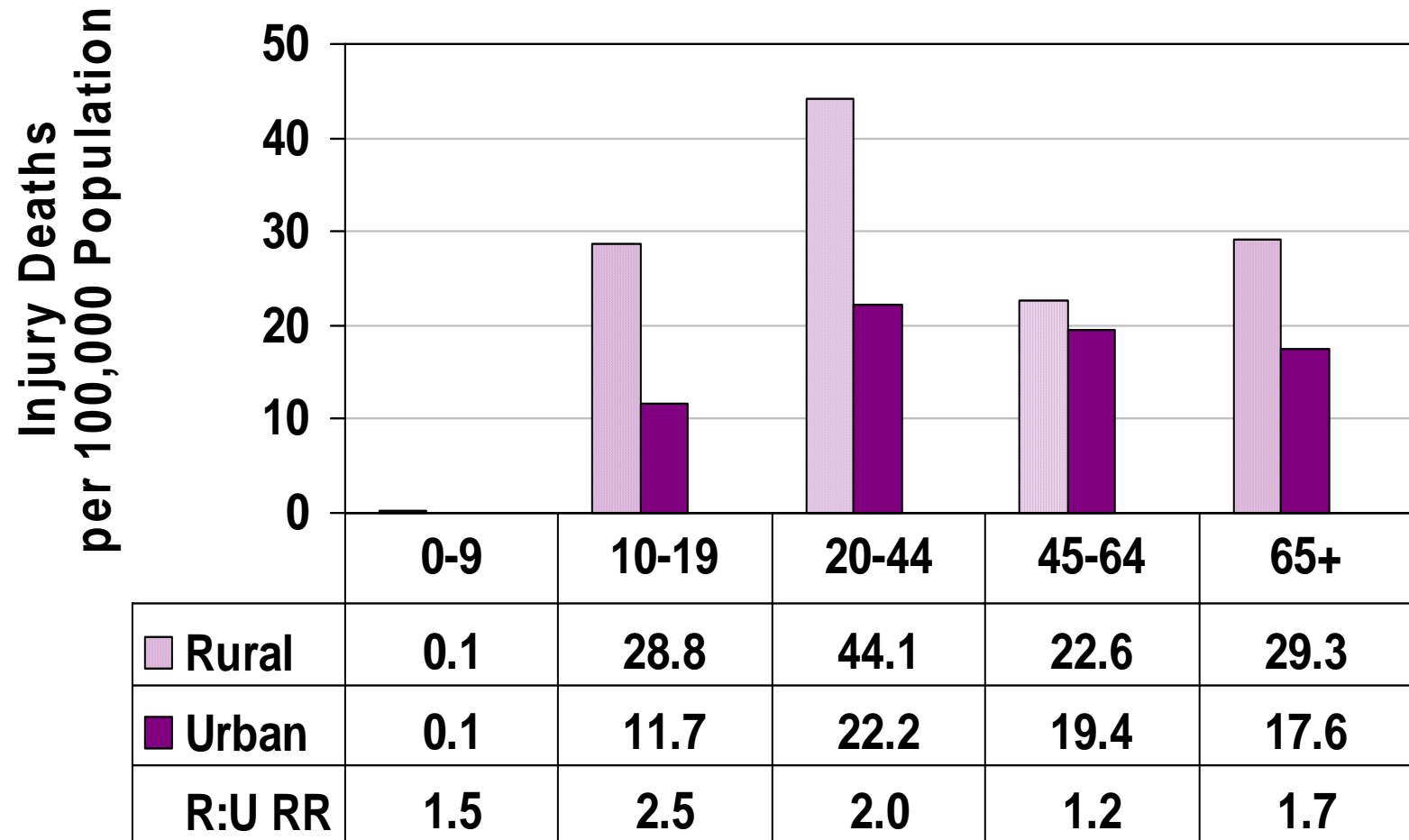
Suicide Rate by Region of Residence, 5-Year Age Groups Alaska Residents, 1981-2000



Source: DHSS/ABVS

Suicide Rate by Age and Region of Residence

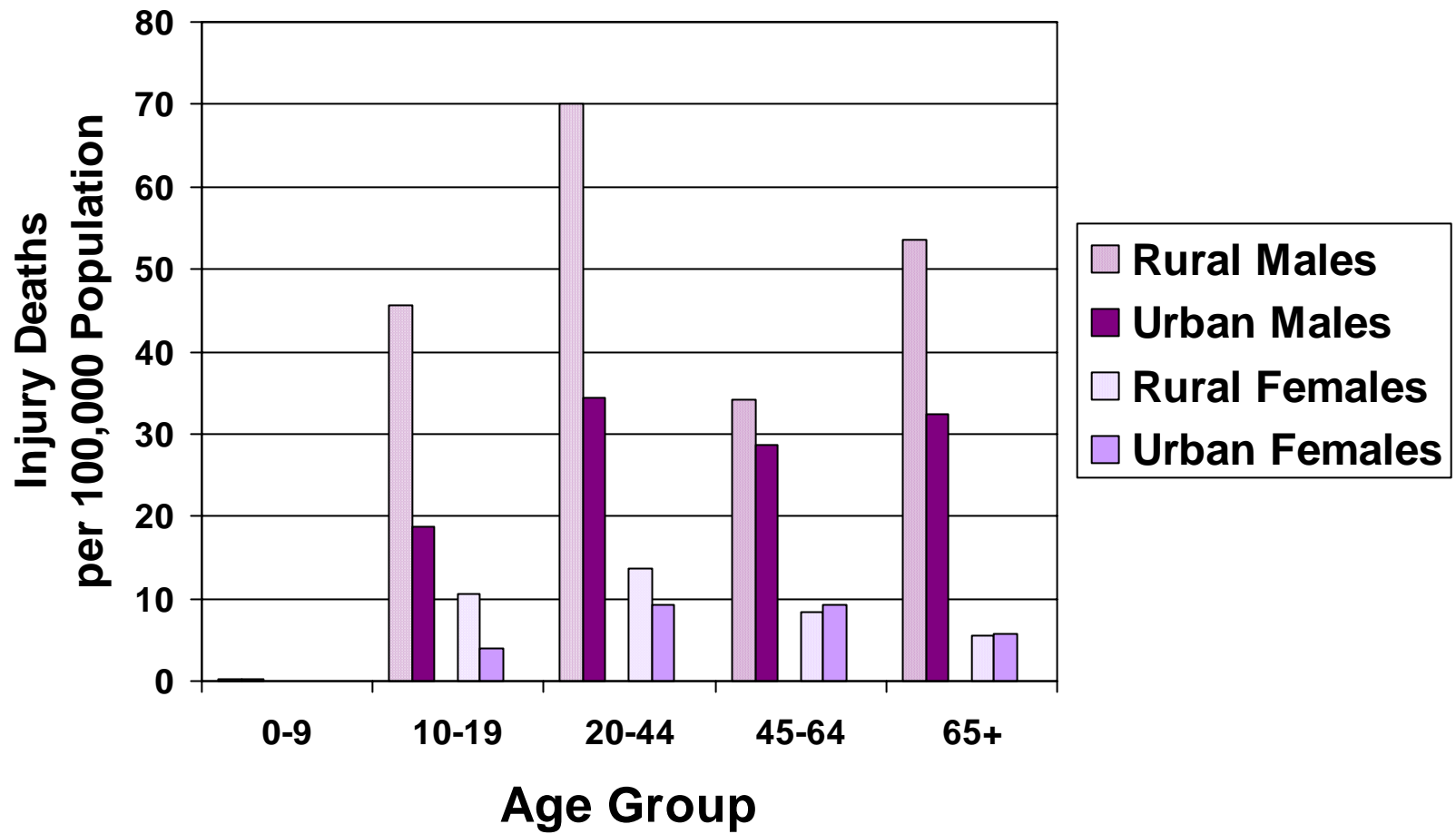
Alaska Residents, 1981-2000



Source: DHSS/ABVS

Suicide Rate by Age, Sex and Region of Residence (Graph)

Alaska Residents, 1981-2000



Source: DHSS/ABVS

Suicide Rate by Age, Sex and Region of Residence (Data Table) Alaska Residents, 1981-2000

Sex	Age Group	Rural		Urban		Rate Ratio (R:U)
		Count	Rate	Count	Rate	
Males						
	0-9	1	0.2	1	0.2	1.4
	10-19	174	45.6	97	18.8	2.4
	20-44	692	70.2	565	34.3	2.0
	45-64	142	34.1	166	28.7	1.2
	65+	58	53.5	37	32.4	1.7
Females						
	0-9	0	0.0	0	0.0	
	10-19	37	10.5	19	4.0	2.6
	20-44	116	13.7	140	9.2	1.5
	45-64	28	8.3	49	9.3	0.9
	65+	6	5.4	8	5.6	1.0

Source: DHSS/ABVS

Summary: Suicide Rates

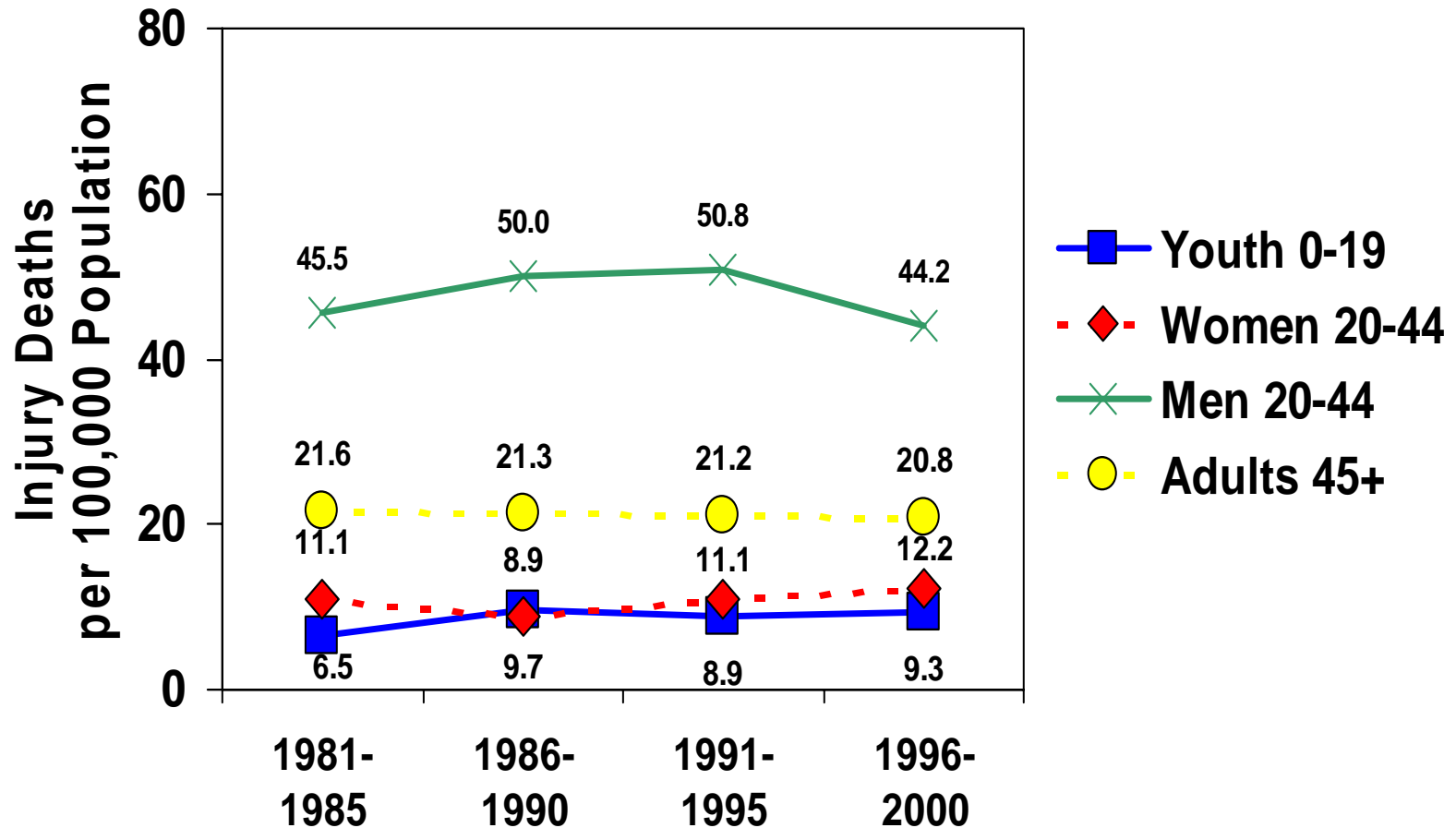
- ✓ Depending on age group, men commit suicide at two-and-a-half to 21 times the rate of same-aged women.
- ✓ Among those less than 60, Alaska Natives commit suicide at higher rates than Whites; the highest Native-to-White rate ratio is for those between 20 and 29 years of age.
- ✓ Although the highest suicide rates are seen among Alaska Native males, the largest Native-to-White rate ratio (6.3) is found among young women between 10 and 19 years old.
- ✓ The rural-to-urban disparity in suicide rates is largely limited to those between the ages of 10 and 34.

Trends in Disparities among Suicide Rates

Alaska 1981-2000

Age-Specific Rates, Rate Ratios
and Rate Differences across 20 Years
with focus on Youth (0-19), Women and Men 20-44,
and Older Adults (45 and older)

Trends in Suicide Rates for Selected Groups: Alaska Residents, 1981-2000

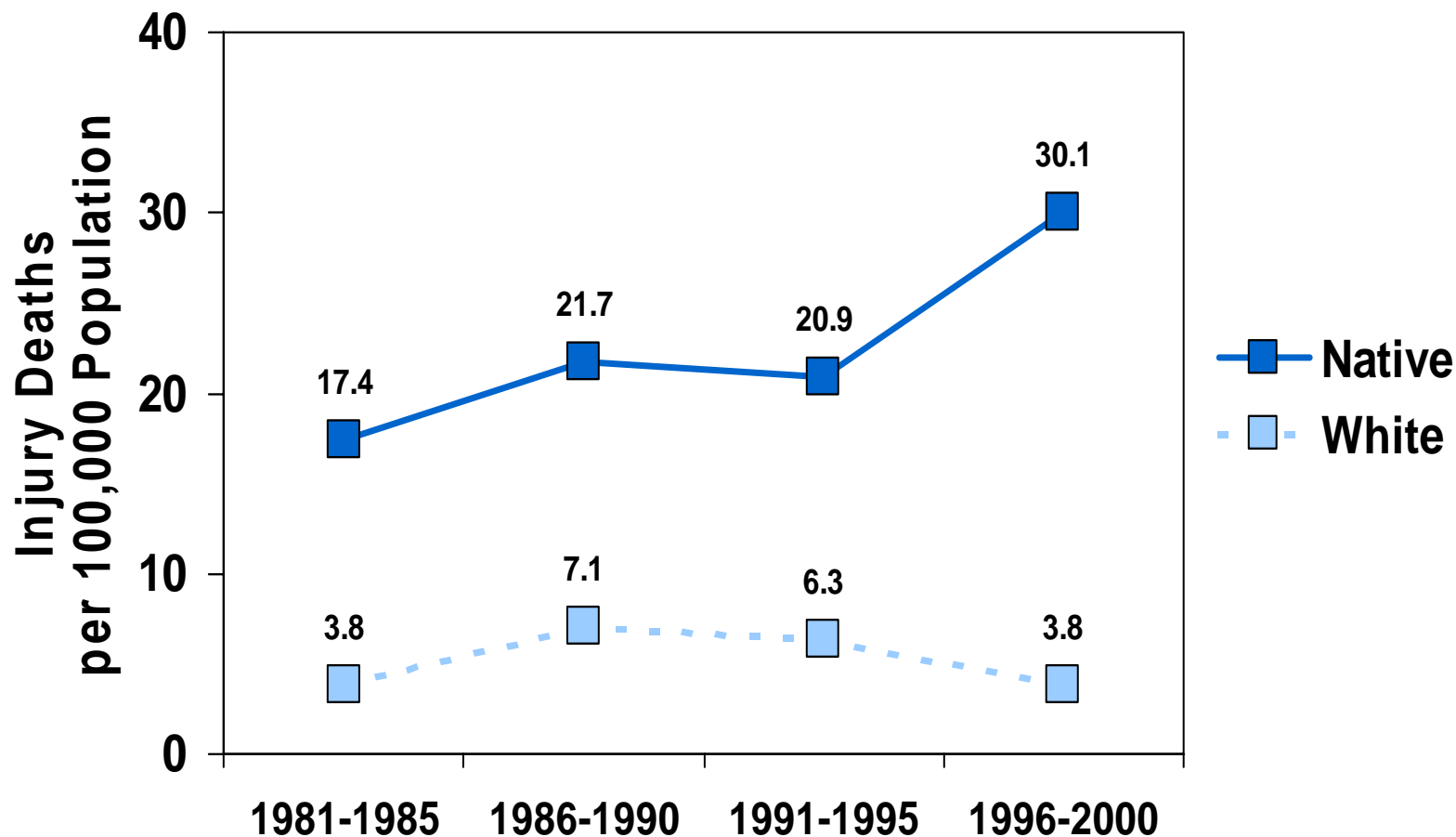


Source: DHSS/ABVS

Trends in Suicide Deaths and Death Rates for Selected Groups: Alaska Residents, 1981-2000

Years	Total	Youth 0-19	Women 20-44	Men 20-44	Adults 45+
<u>Deaths</u>					
1981-1985	484	55	62	280	87
1986-1990	588	88	55	341	104
1991-1995	646	90	68	354	134
1996-2000	619	97	71	282	169
<u>Death Rates</u>					
1981-1985	20.0	6.5	11.1	45.5	21.6
1986-1990	21.8	9.7	8.9	50.0	21.3
1991-1995	21.9	8.9	11.1	50.8	21.2
1996-2000	20.1	9.3	12.2	44.2	20.8

Trends in Suicide Rates: Racial Disparities among *Youth 0-19* Alaska Residents, 1981-2000

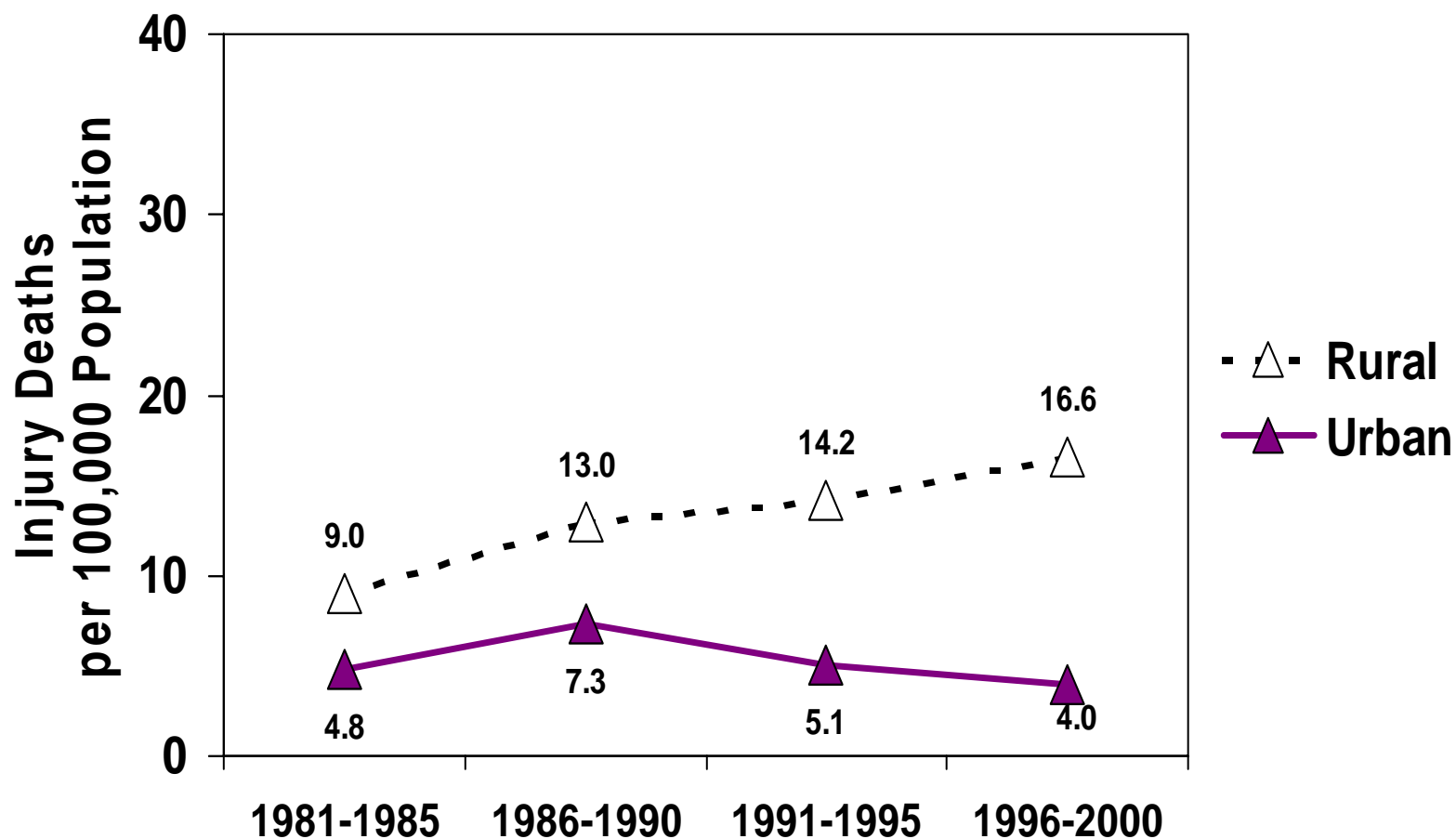


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: **Youth 0-19**, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	17.4	28	3.8	24	4.6	13.6
1986-1990	21.7	39	7.1	47	3.0	14.6
1991-1995	20.9	44	6.3	45	3.3	14.5
1996-2000	30.1	68	3.8	27	7.9	26.3

Trends in Suicide Rates: Regional Disparities among *Youth 0-19* Alaska Residents, 1981-2000

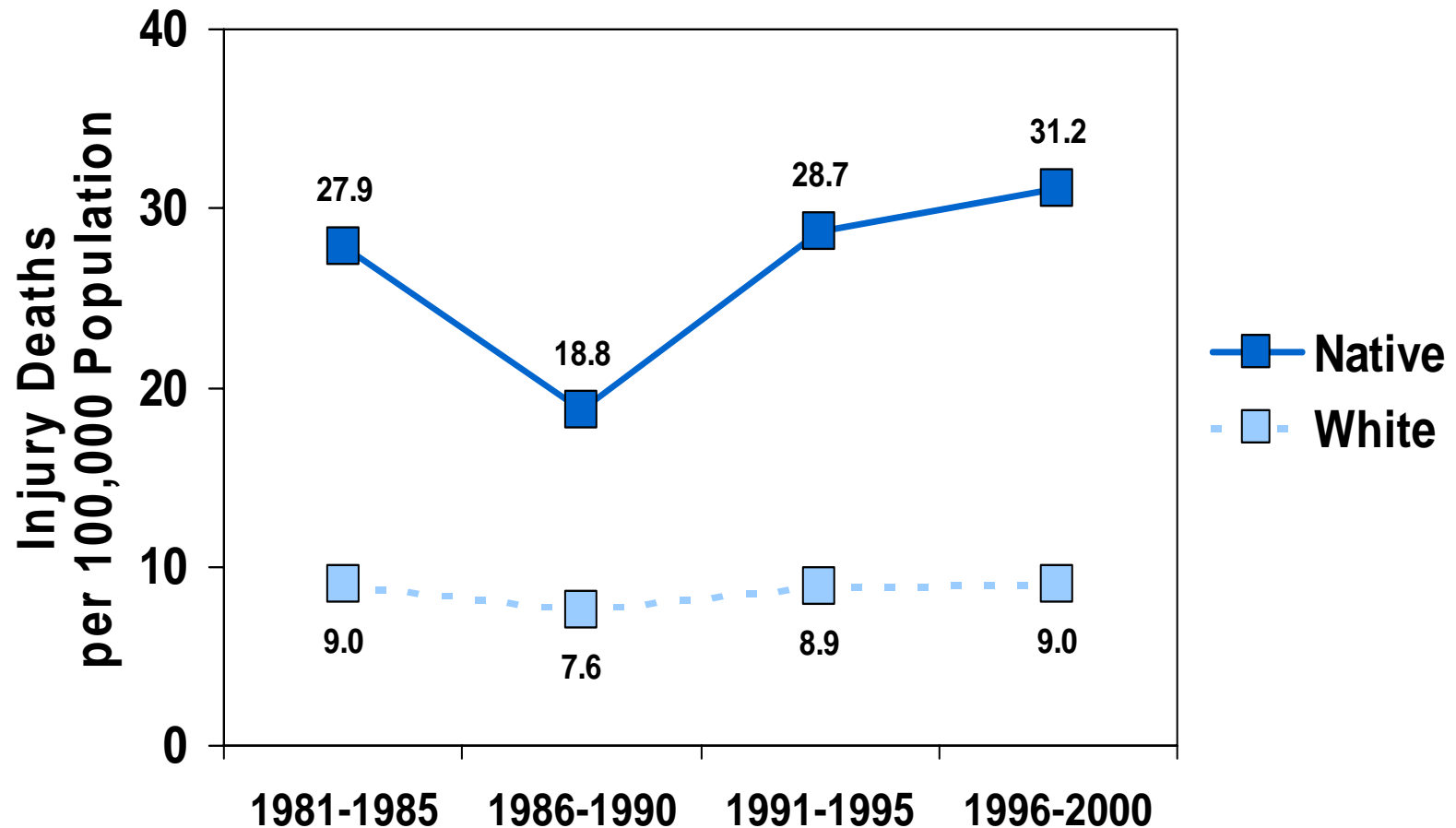


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: **Youth 0-19**, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	9.0	31	4.8	24	1.9	4.2
1986-1990	13.0	49	7.3	39	1.8	5.7
1991-1995	14.2	60	5.1	30	2.8	9.1
1996-2000	16.6	73	4.0	24	4.2	12.6

Trends in Suicide Rates: Racial Disparities among **Women 20-44** Alaska Residents, 1981-2000

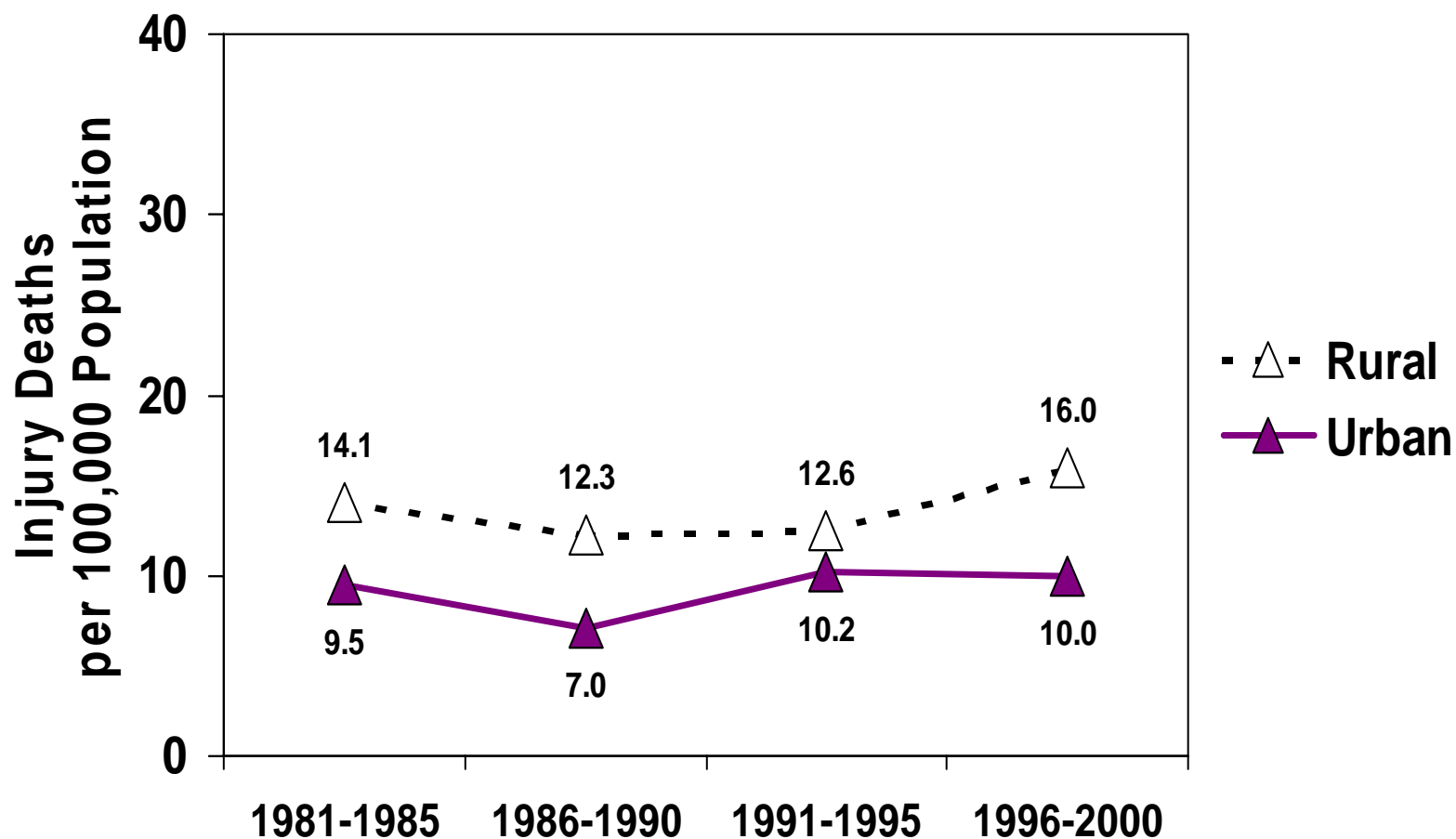


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Women 20-44***, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	27.9	19	9.0	41	3.1	18.9
1986-1990	18.8	15	7.6	37	2.5	11.2
1991-1995	28.7	25	8.9	42	3.2	19.9
1996-2000	31.2	28	9.0	39	3.4	22.1

Trends in Suicide Rates: Regional Disparities among **Women 20-44** Alaska Residents, 1981-2000

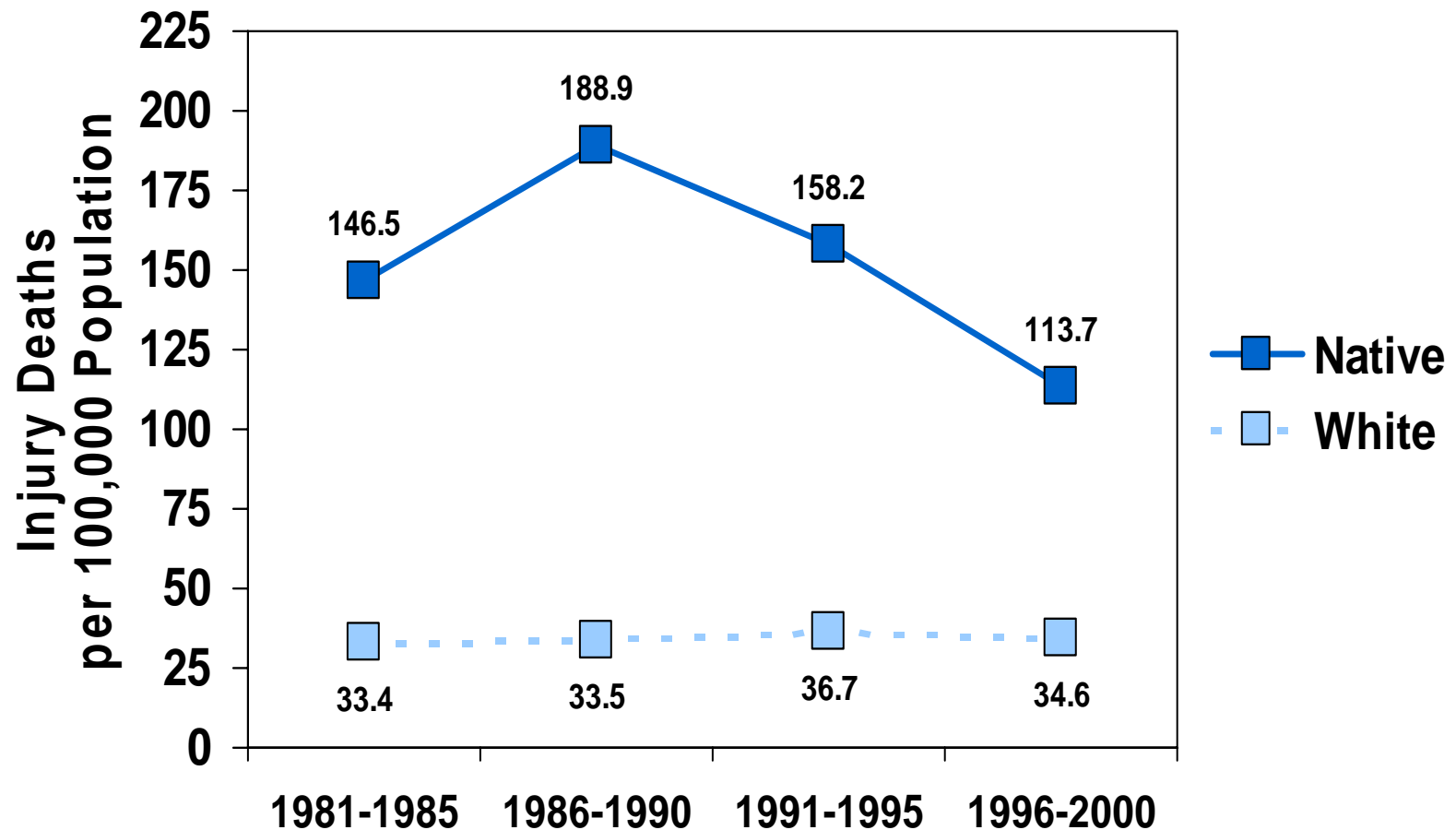


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Women 20-44***, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	14.1	27	9.5	35	1.5	4.6
1986-1990	12.3	27	7.0	28	1.7	5.3
1991-1995	12.6	28	10.2	40	1.2	2.3
1996-2000	16.0	34	10.0	37	1.6	6.0

Trends in Suicide Rates: Racial Disparities among *Men 20-44* Alaska Residents, 1981-2000

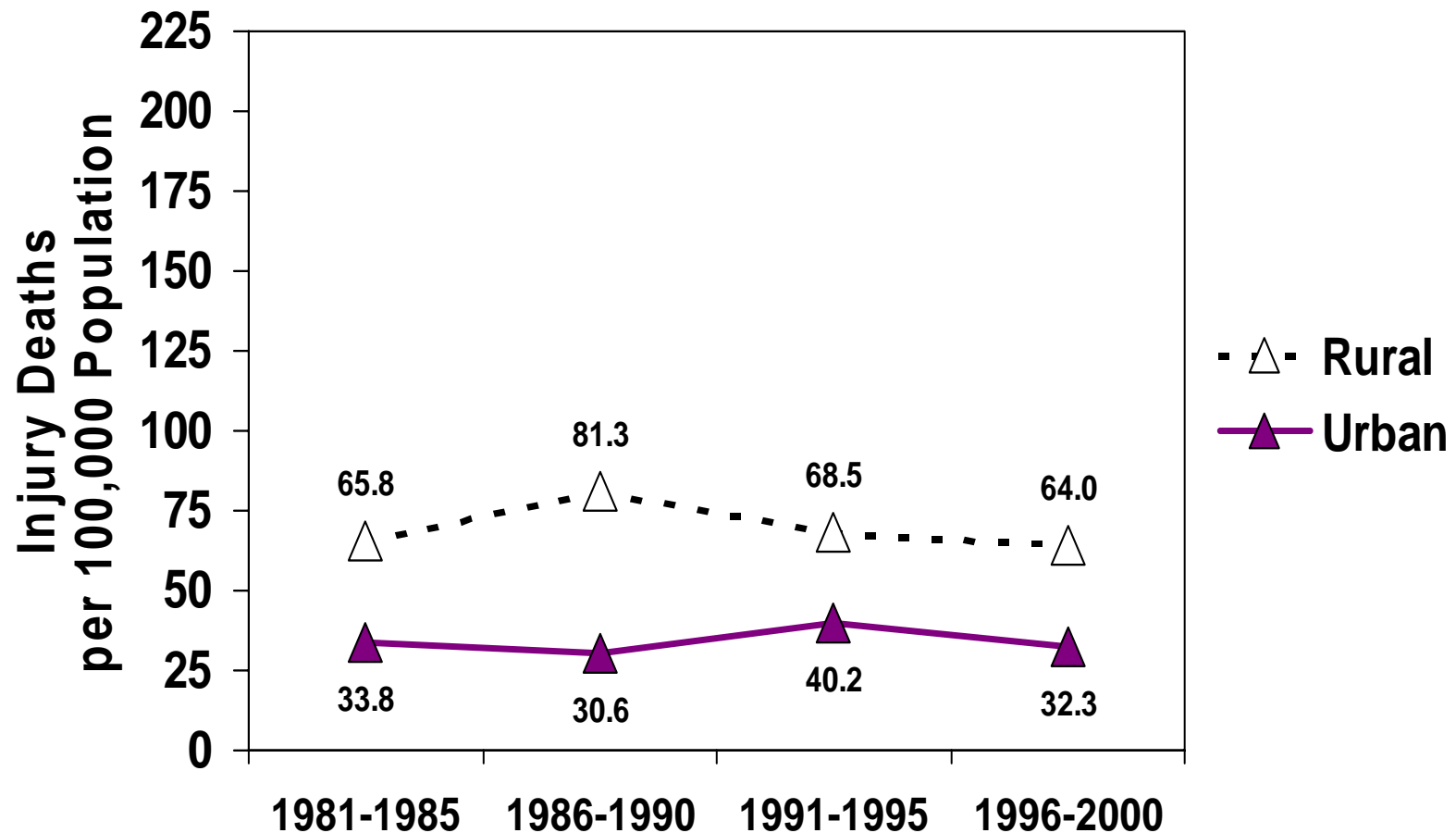


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Men 20-44***, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	146.5	98	33.4	173	4.4	113.0
1986-1990	188.9	148	33.5	183	5.6	155.4
1991-1995	158.2	139	36.7	200	4.3	121.5
1996-2000	113.7	103	34.6	165	3.3	79.1

Trends in Suicide Rates: Regional Disparities among **Men 20-44** Alaska Residents, 1981-2000

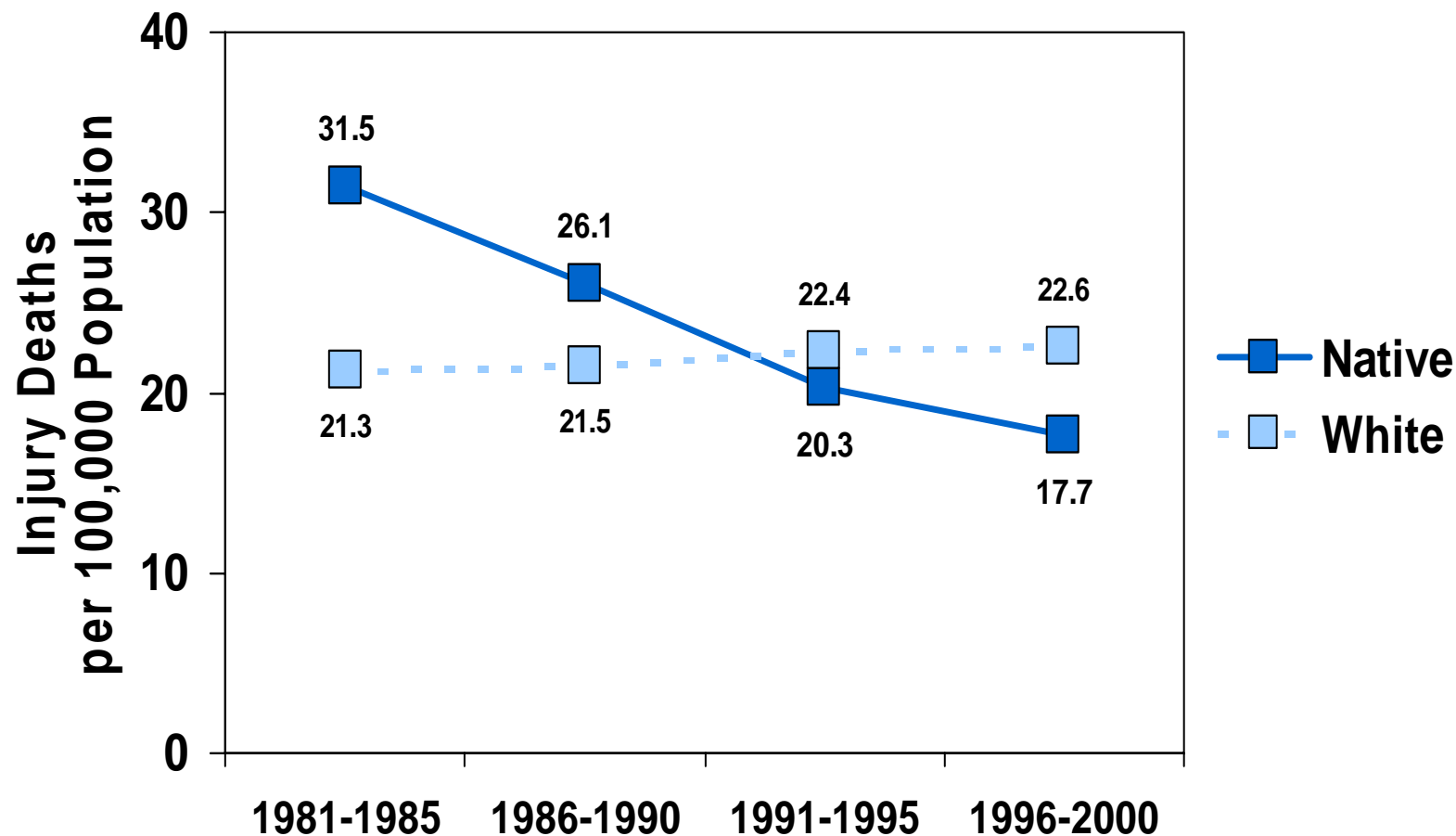


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Men 20-44***, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	65.8	148	33.8	132	1.9	32.0
1986-1990	81.3	212	30.6	129	2.7	50.7
1991-1995	68.5	179	40.2	175	1.7	28.3
1996-2000	64.0	153	32.3	129	2.0	31.8

Trends in Suicide Rates: Racial Disparities among **Adults 45+** Alaska Residents, 1981-2000

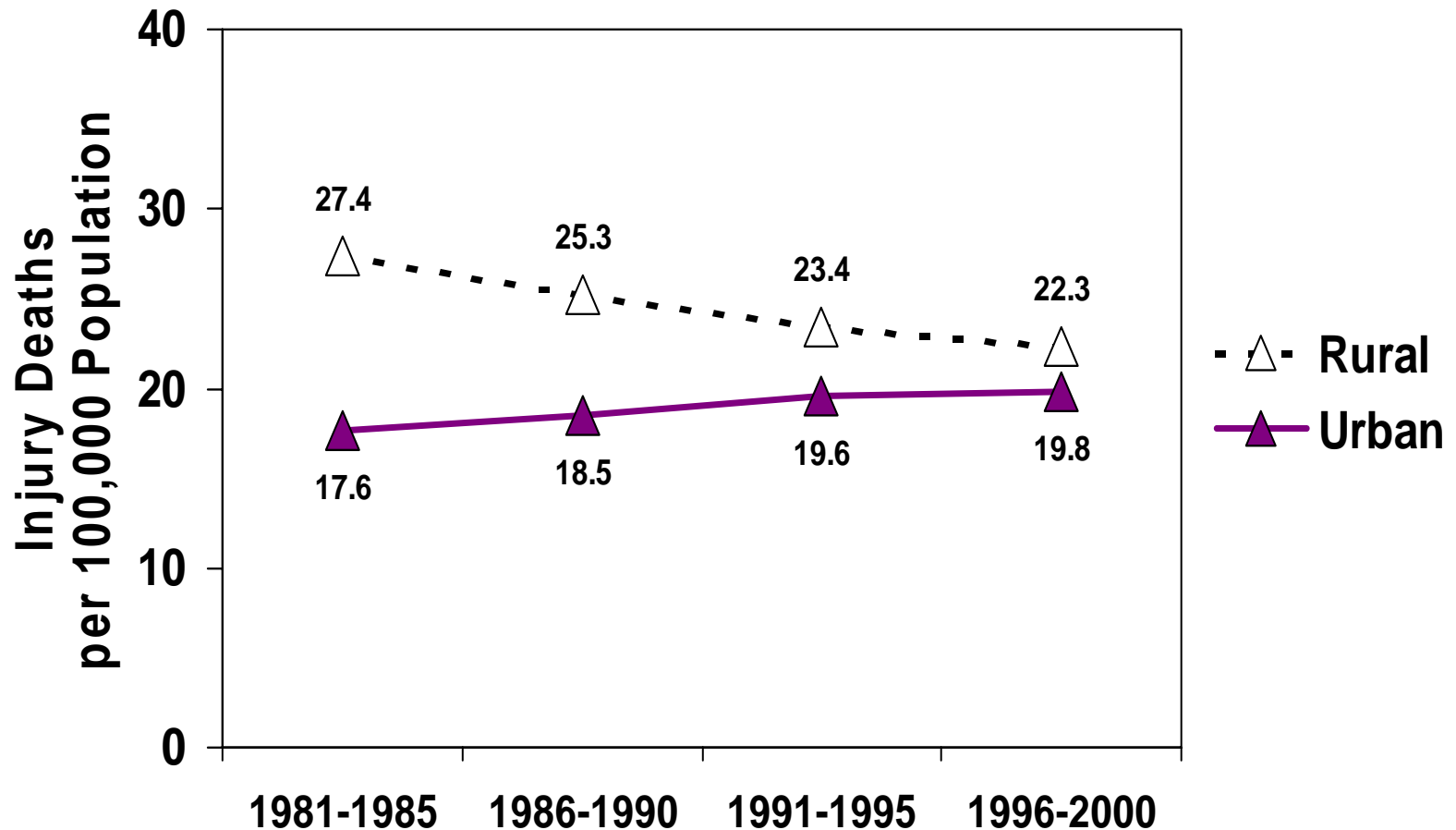


Source: DHSS/ABVS

Suicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: **Adults 45+**, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	31.5	19	21.3	68	1.5	10.2
1986-1990	26.1	18	21.5	84	1.2	4.6
1991-1995	20.3	17	22.4	114	0.9	-2.1
1996-2000	17.7	18	22.6	147	0.8	-4.9

Trends in Suicide Rates: Regional Disparities among **Adults 45+** Alaska Residents, 1981-2000



Source: DHSS/ABVS

Suicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: **Adults 45+**, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	27.4	45	17.6	42	1.6	9.8
1986-1990	25.3	51	18.5	53	1.4	6.8
1991-1995	23.4	62	19.6	72	1.2	3.8
1996-2000	22.3	76	19.8	93	1.1	2.5

Summary: Trends in Suicide Disparities

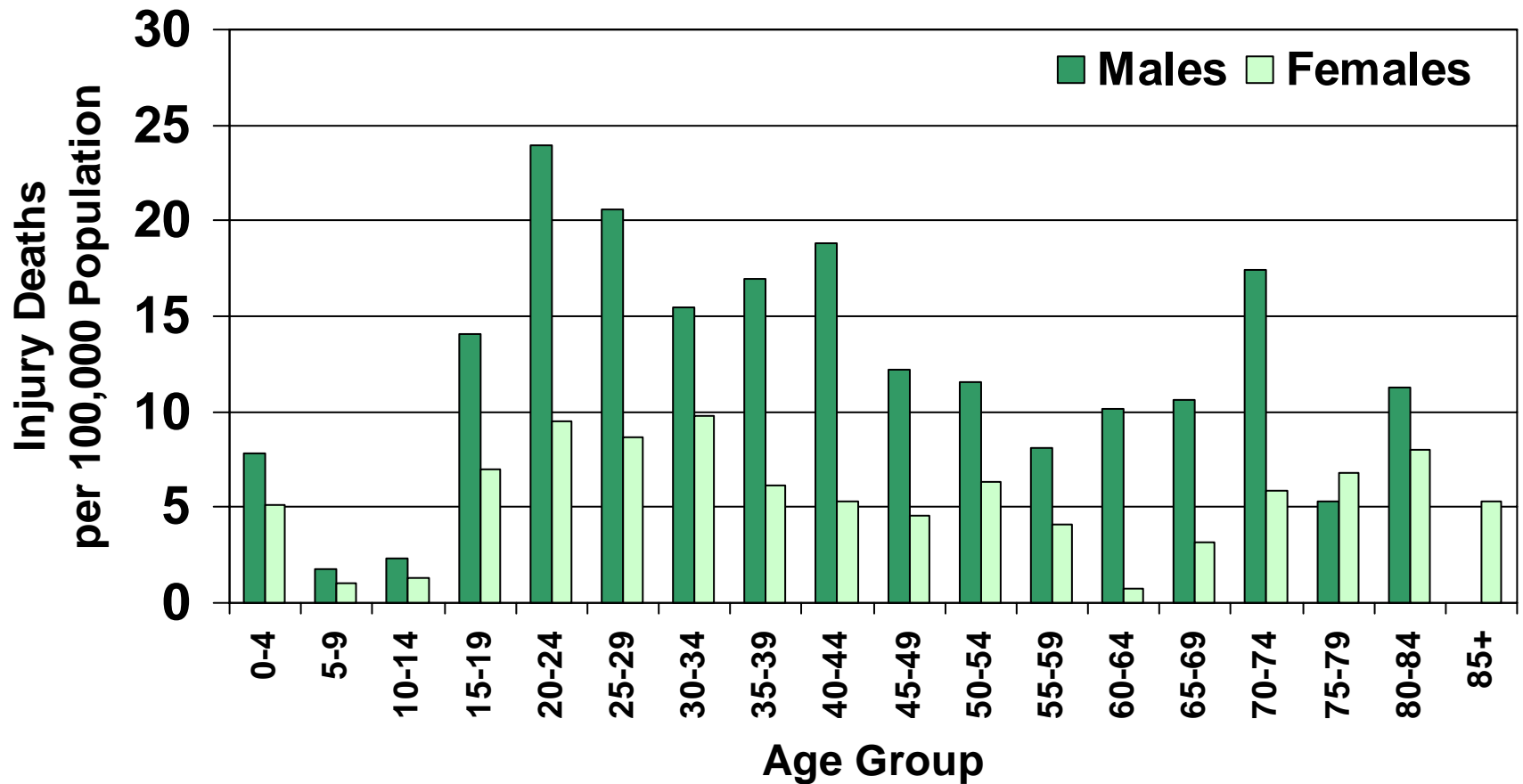
- ✓ Suicide death rates remained relatively stable over the past 20 years, in all 4 target groups.
- ✓ Racial disparities have increased among both youth, 0-19 and women 20-44, while they have decreased among men 20-44 and those 45 and older.
- ✓ Regional disparities increased in the 0-19 age group and decreased in the 45 and older age group; regional disparities remained fairly constant among both women and men 20-44.

Homicide Rates

Alaska, 1981-2000

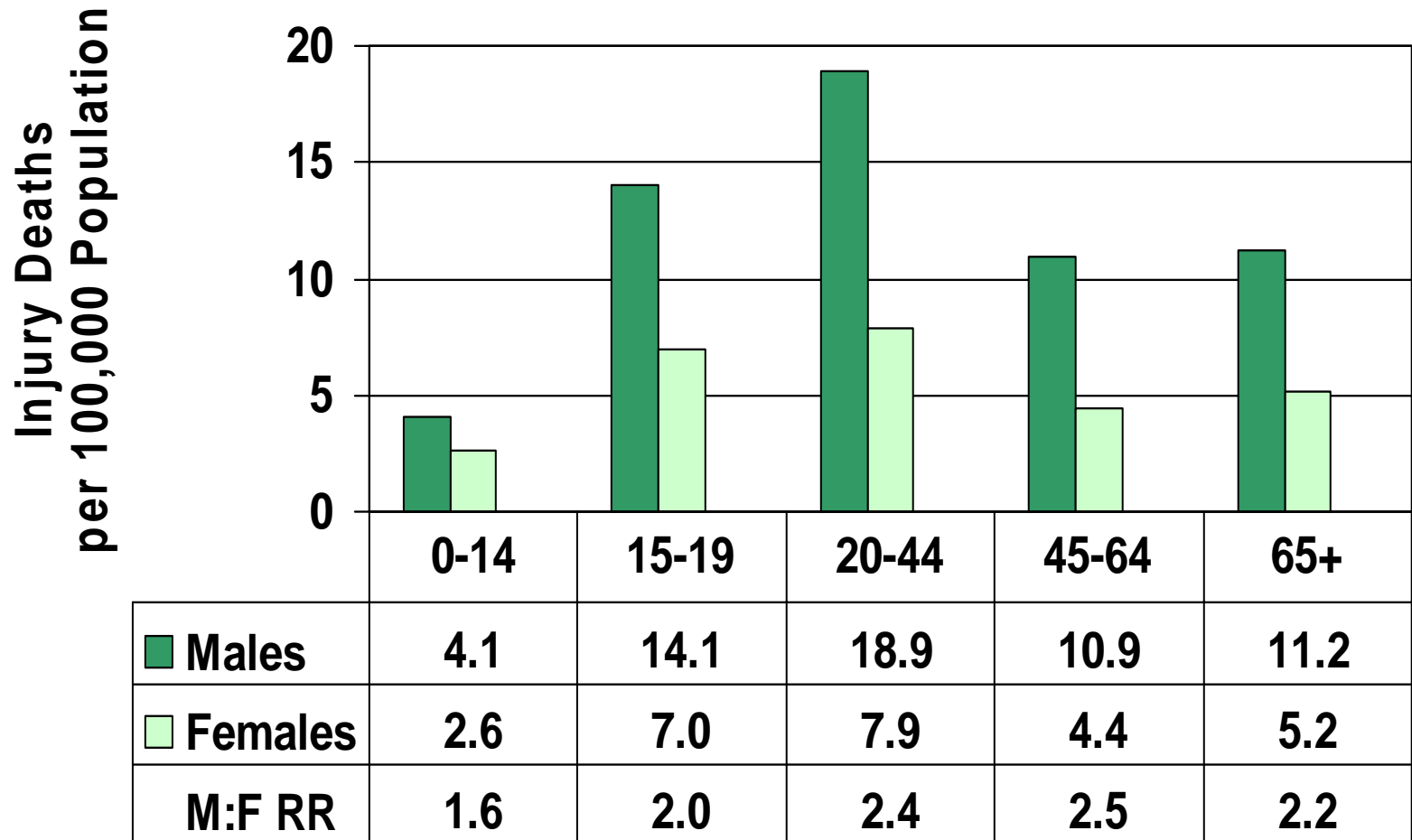
Age-Specific Rates by Sex, Race, and Region

Homicide Rate by Sex, 5-Year Age Groups, Alaska Residents, 1981-2000



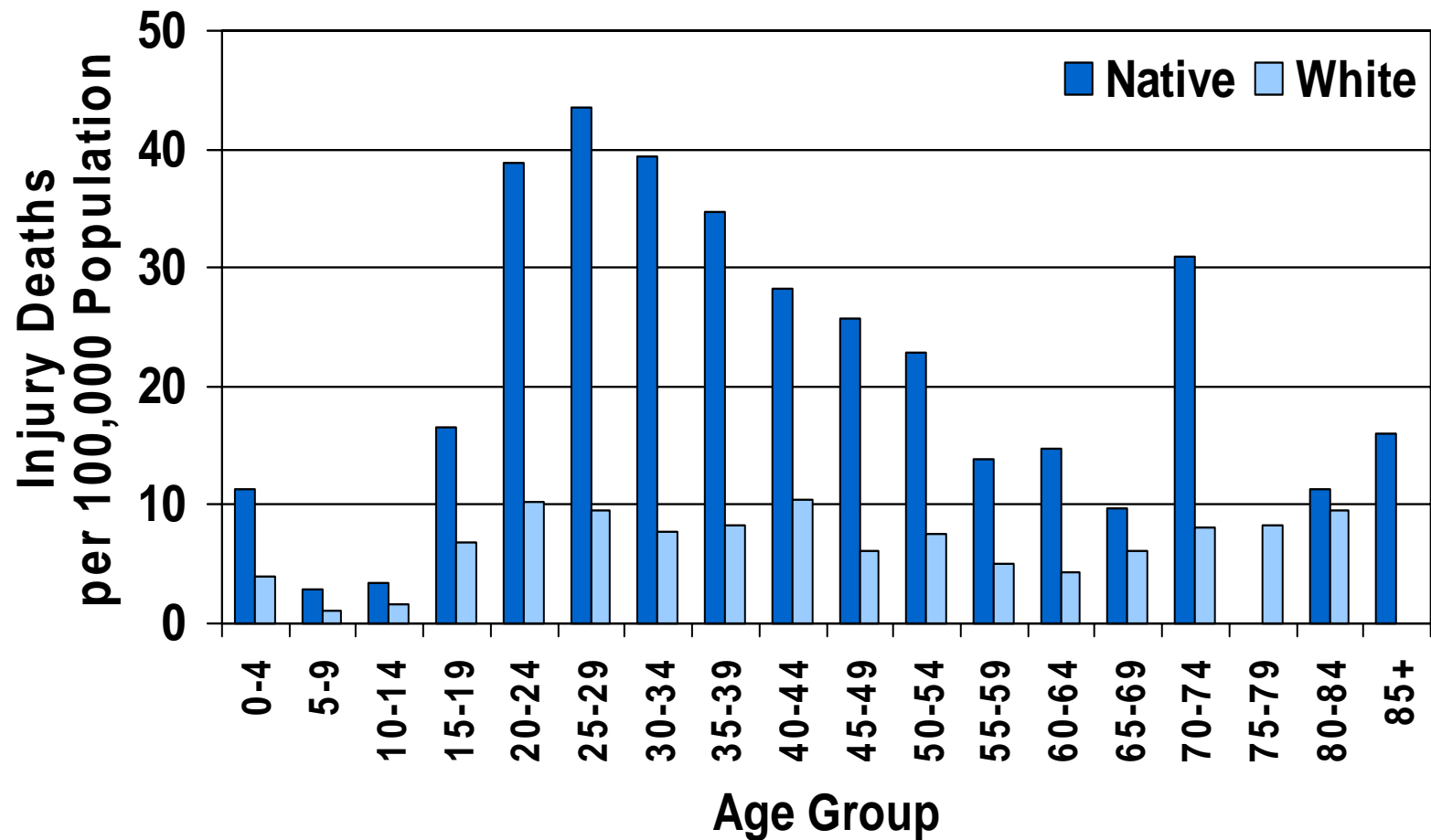
Source: DHSS/ABVS

Homicide rate by Age and Sex Alaska Residents, 1981-2000



Source: DHSS/ABVS

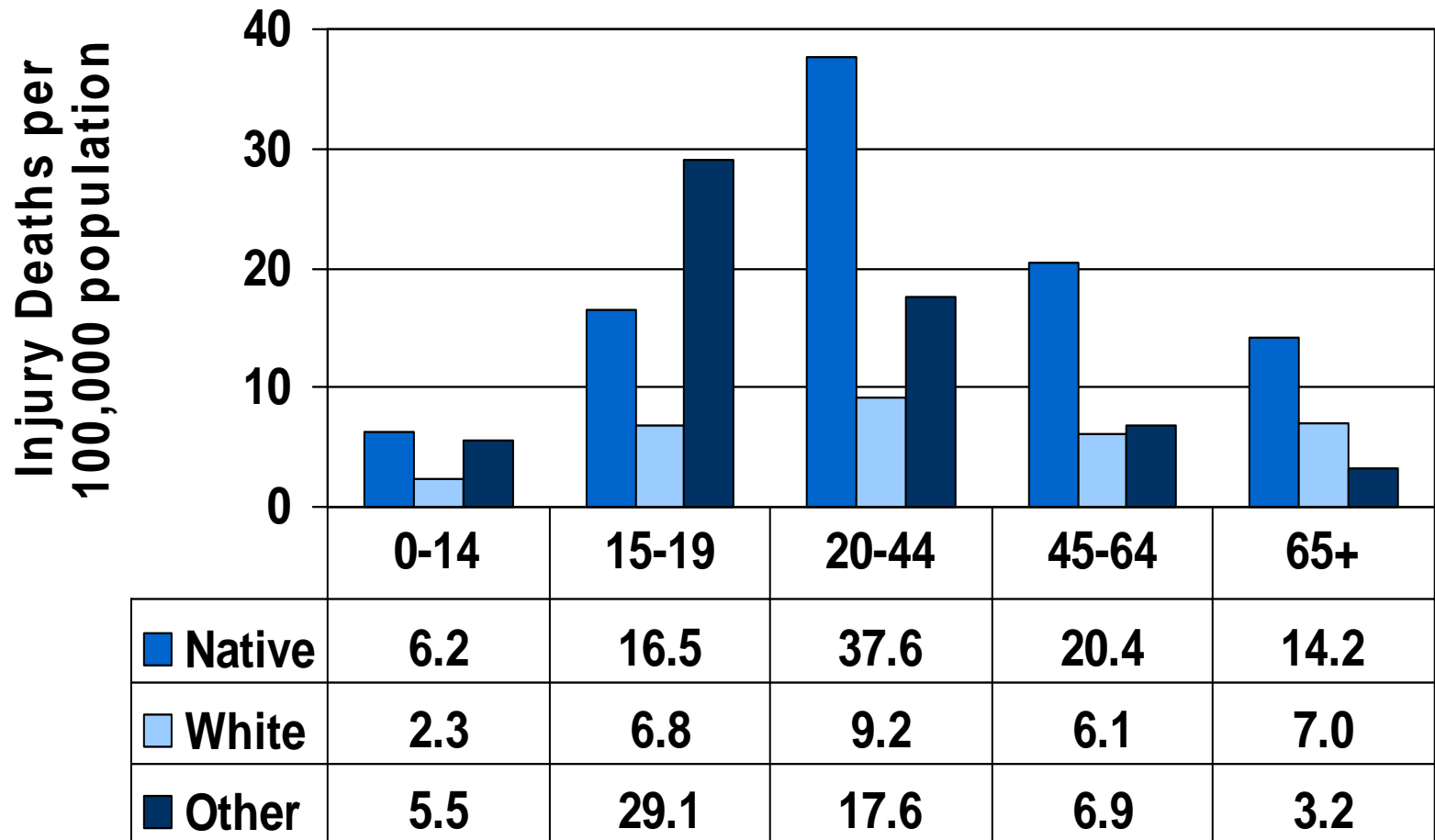
Homicide rate by Race, 5-Year Age Groups Alaska Residents, 1981-2000



Source: DHSS/ABVS

Homicide Rate by Age and Race

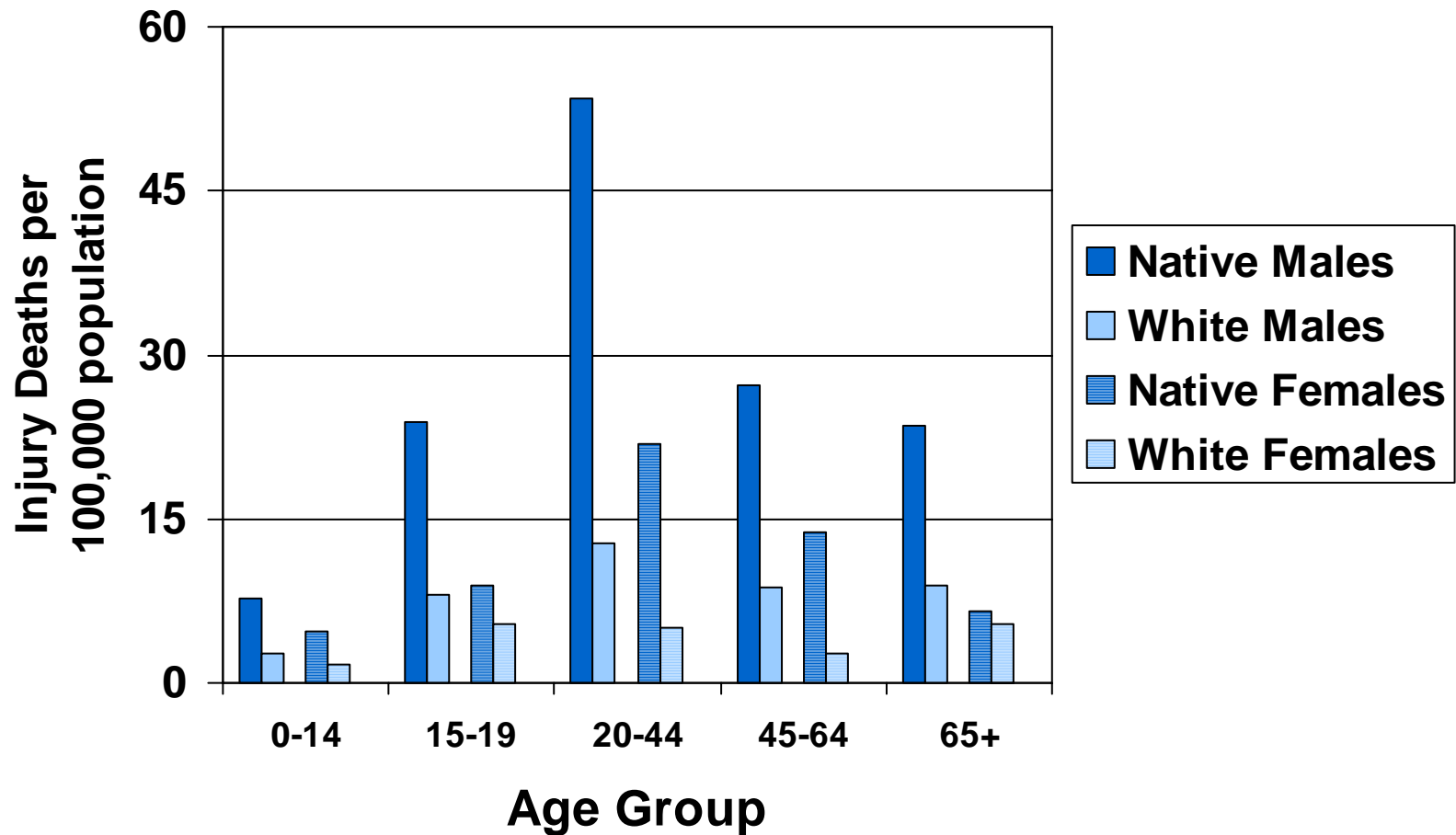
Alaska Residents, 1981-2000



Source: DHSS/ABVS

Homicide Rate by Age, Sex, and Race (Graph)

Alaska Residents, 1981-2000



Source: DHSS/ABVS

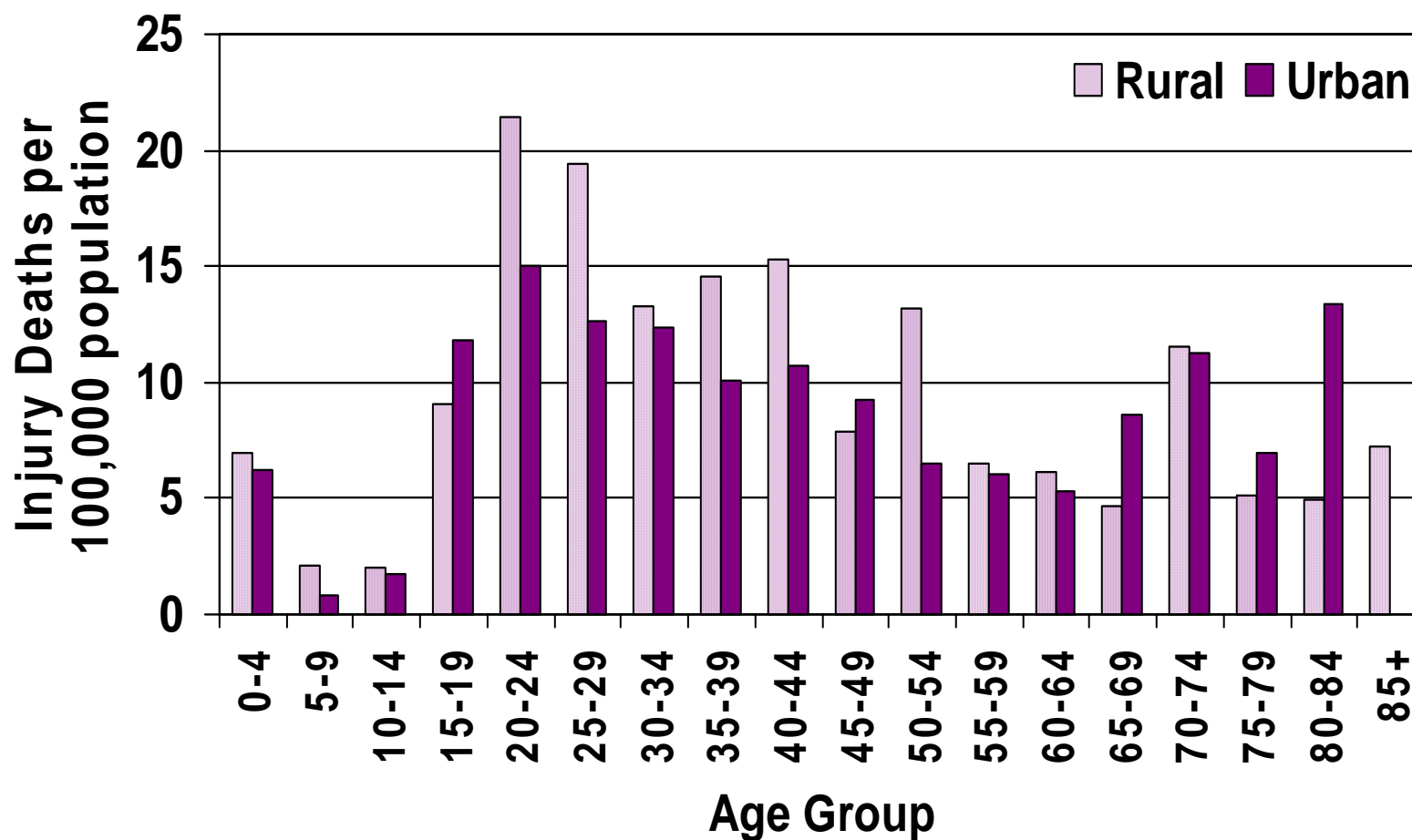
Homicide Rate by Age, Sex, and Race (Data Table)

Alaska Residents, 1981-2000

Sex	Age Group	Native		White		Rate Ratio (N:W)
		Count	Rate	Count	Rate	
Males						
	0-14	24	7.7	30	2.7	2.8
	15-19	20	23.8	25	8.1	2.9
	20-44	173	53.5	267	12.8	4.2
	45-64	31	27.2	73	8.8	3.1
	65+	9	23.5	15	8.9	2.7
Females						
	0-14	14	4.7	18	1.8	2.7
	15-19	7	8.8	15	5.5	1.6
	20-44	71	21.9	93	5.0	4.3
	45-64	16	13.7	19	2.8	5.0
	65+	3	6.5	10	5.4	1.2

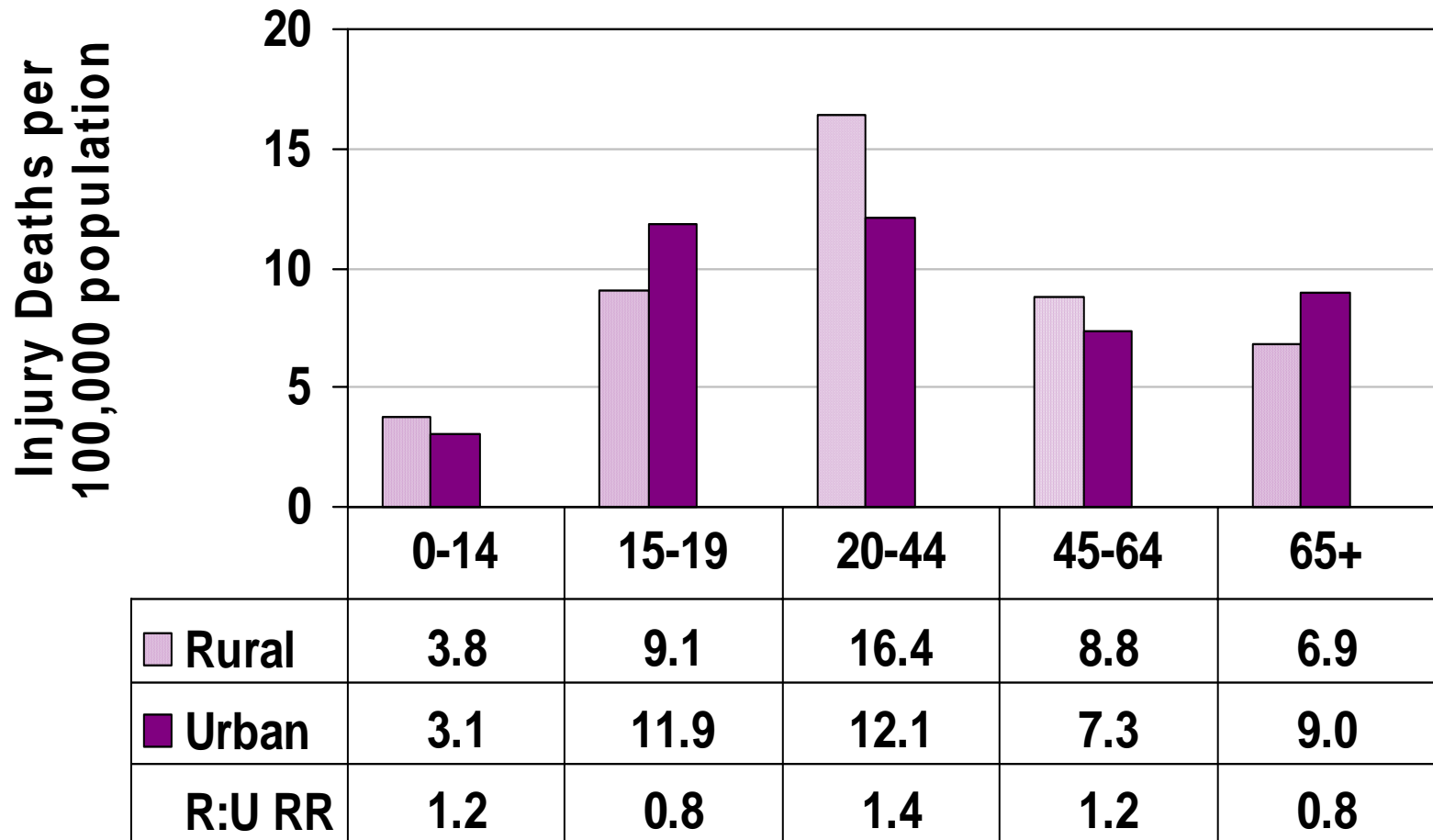
Source: DHSS/ABVS

Homicide Rate by Region of Residence, 5-Year Age Groups Alaska Residents, 1981-2000



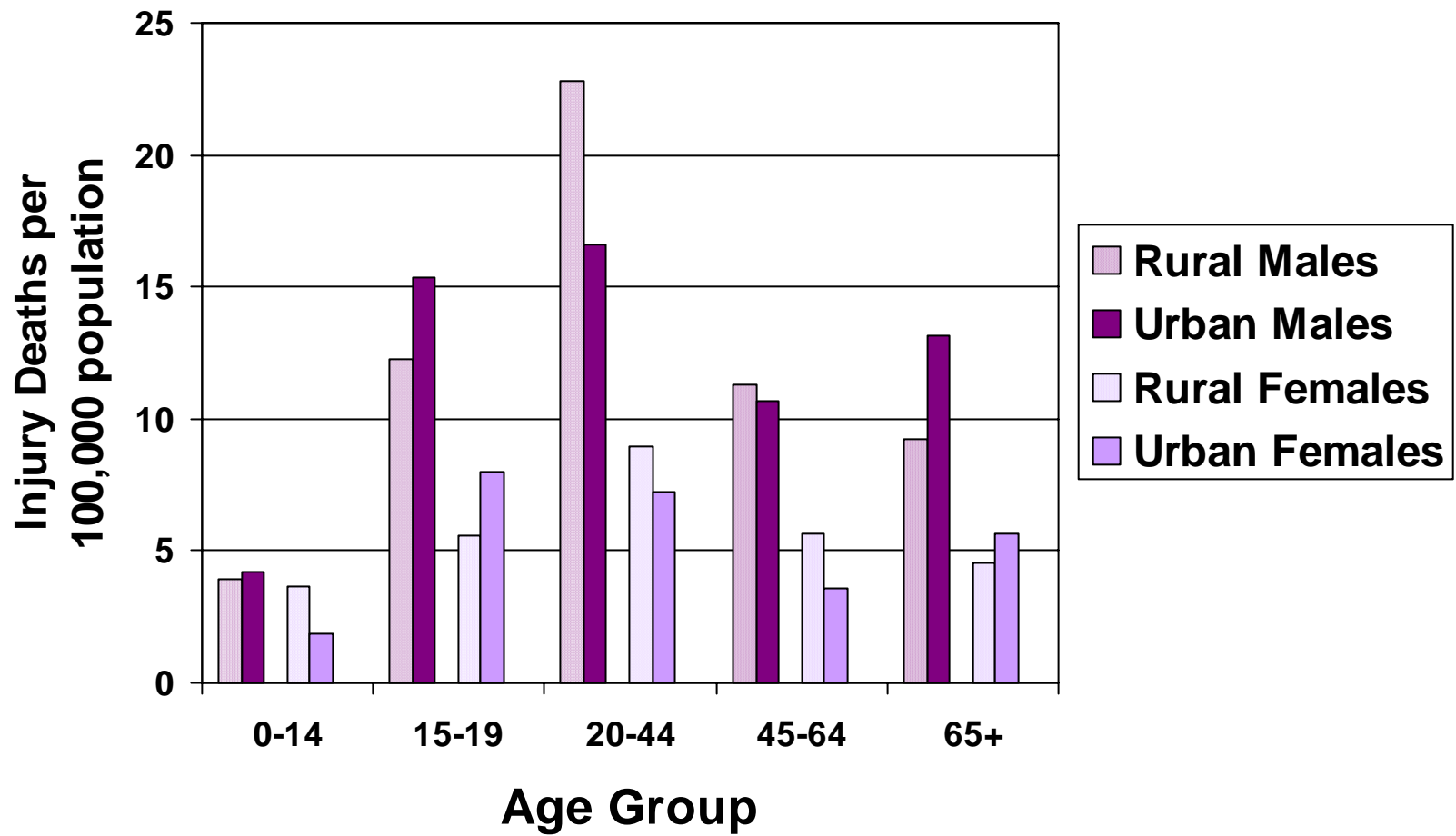
Homicide Rates by Age and Region of Residence

Alaska Residents, 1981-2000



Source: DHSS/ABVS

Homicide Rates by Age, Sex and Region of Residence (Graph) Alaska Residents, 1981-2000



Source: DHSS/ABVS

Homicide Rates by Age, Sex and Region of Residence (Data Table) Alaska Residents, 1981-2000

Sex	Age Group	Rural		Urban		Rate Ratio (R:U)
		Count	Rate	Count	Rate	
Males						
	0-14	25	3.9	38	4.2	0.9
	15-19	22	12.2	38	15.4	0.8
	20-44	225	22.8	273	16.6	1.4
	45-64	47	11.3	62	10.7	1.1
	65+	10	9.2	15	13.1	0.7
Females						
	0-14	22	3.6	16	1.9	1.9
	15-19	9	5.6	18	8.0	0.7
	20-44	76	9.0	111	7.3	1.2
	45-64	19	5.7	19	3.6	1.6
	65+	5	4.5	8	5.6	0.8

Source: DHSS/ABVS

Summary: Homicide Rates

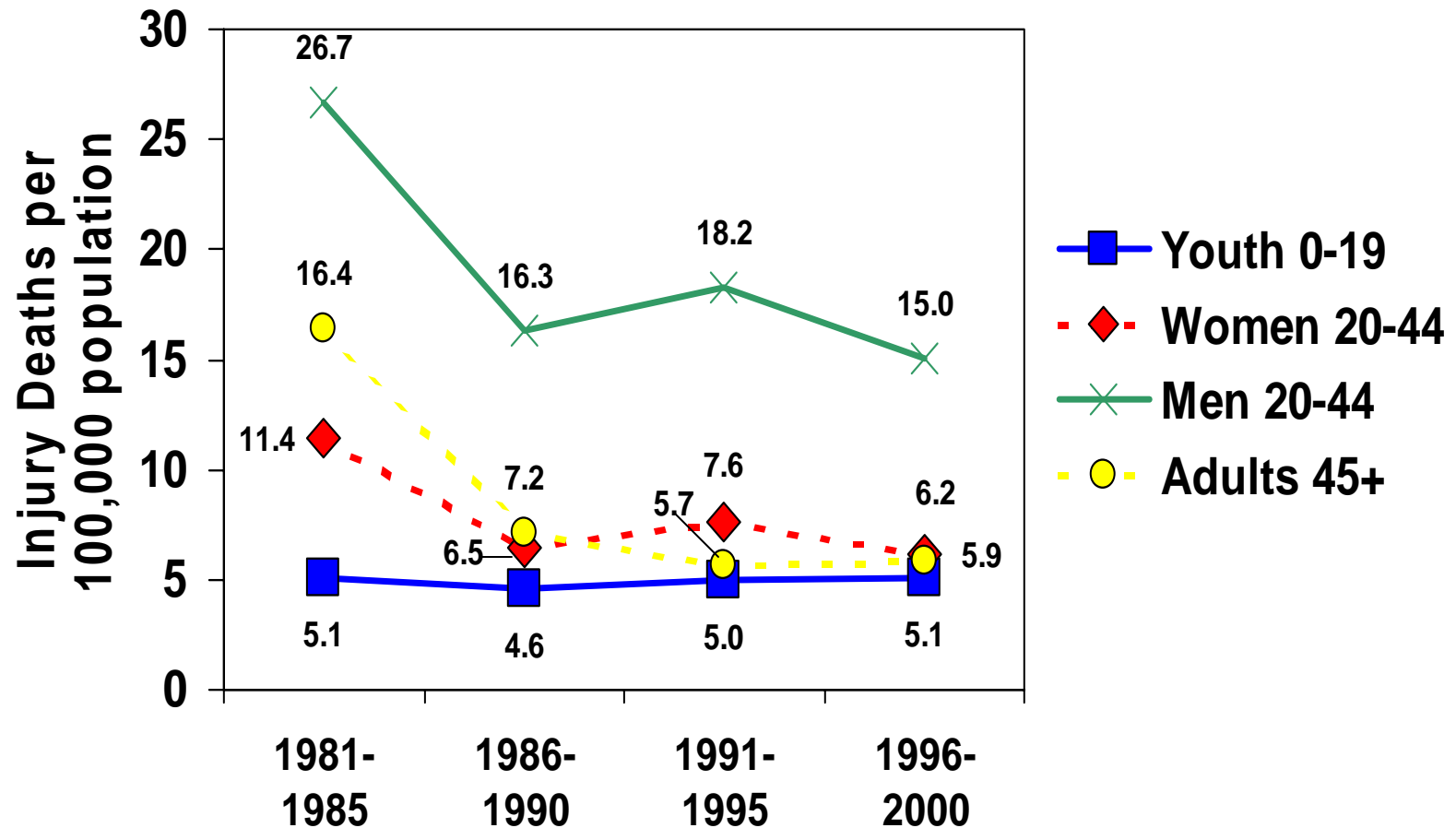
- ✓ Homicide rates for men are higher than those for women in all age groups.
- ✓ Homicide rates for Alaska Native are higher than for Whites, with the largest Native-to-White rate ratio (5.1) among 30 to 34 years-olds.
- ✓ Among 15 to 19 year-olds, the homicide rate for Alaskans of “other races” (n = 20 homicides) was higher than the rate for either Whites (n = 40 homicides) or Alaska Natives (n = 27 homicides).
- ✓ When considering only Alaska Native and White men and women, the highest homicide rates are found among Alaska Native males; however, the largest Native-to-White rate ratio is found among women age 45 to 64.
- ✓ Rates of homicide are comparable in rural and urban areas.

Trends in Disparities among Homicide Rates

Alaska 1981-2000

Age-Specific Rates, Rate Ratios
and Rate Differences across 20 Years
with focus on Youth (0-19), Women and Men 20-44,
and Older Adults (45 and older)

Trends in Homicide Rates for Selected Groups: Alaska Residents, 1981-2000

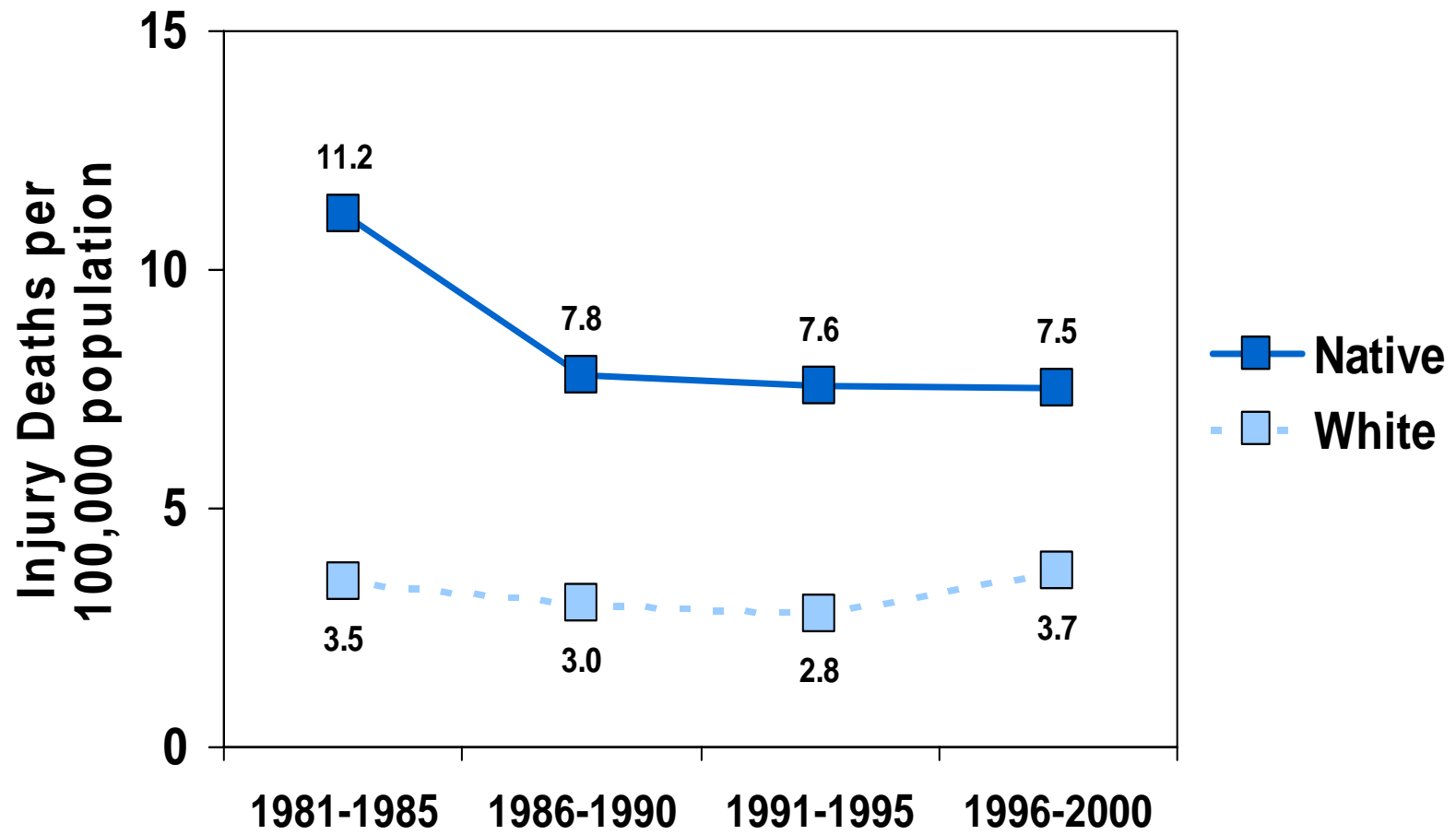


Source: DHSS/ABVS

Trends in Homicide Deaths and Death Rates for Selected Groups: Alaska Residents, 1981-2000

Years	Total	Youth 0-19	Women 20-44	Men 20-44	Adults 45+
<u>Deaths</u>					
1981-1985	337	43	64	164	66
1986-1990	228	42	40	111	35
1991-1995	260	50	47	127	36
1996-2000	233	53	36	96	48
<u>Death Rates</u>					
1981-1985	13.9	5.1	11.4	26.7	16.4
1986-1990	8.5	4.6	6.5	16.3	7.2
1991-1995	8.8	5.0	7.6	18.2	5.7
1996-2000	7.6	5.1	6.2	15.0	5.9

Trends in Homicide Rates: Racial Disparities among *Youth 0-19* Alaska Residents, 1981-2000

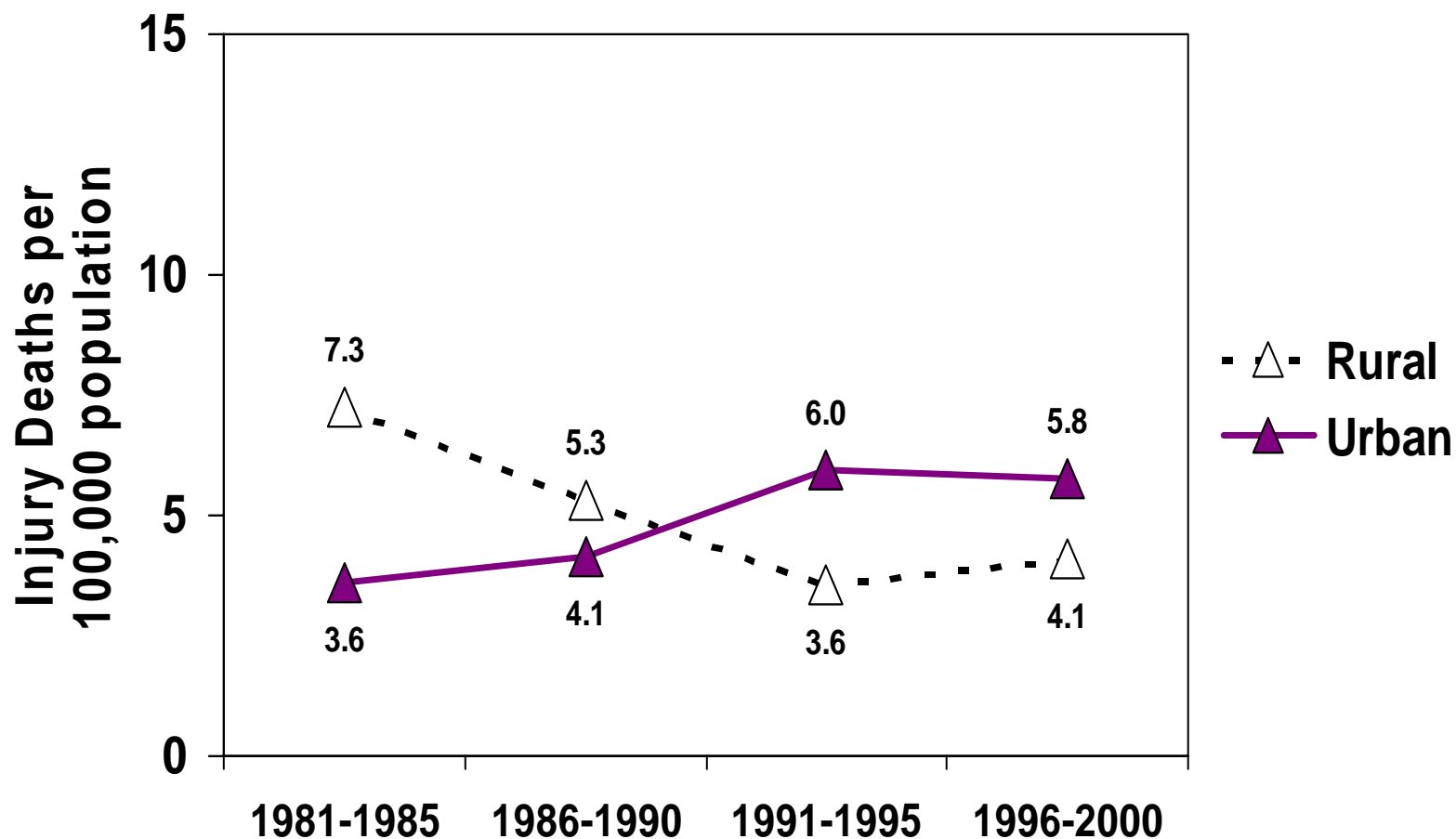


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: **Youth 0-19**, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	11.2	18	3.5	22	3.2	7.7
1986-1990	7.8	14	3.0	20	2.6	4.8
1991-1995	7.6	16	2.8	20	2.7	4.8
1996-2000	7.5	17	3.7	26	2.0	3.8

Trends in Homicide Rates: Regional Disparities among *Youth 0-19* Alaska Residents, 1981-2000

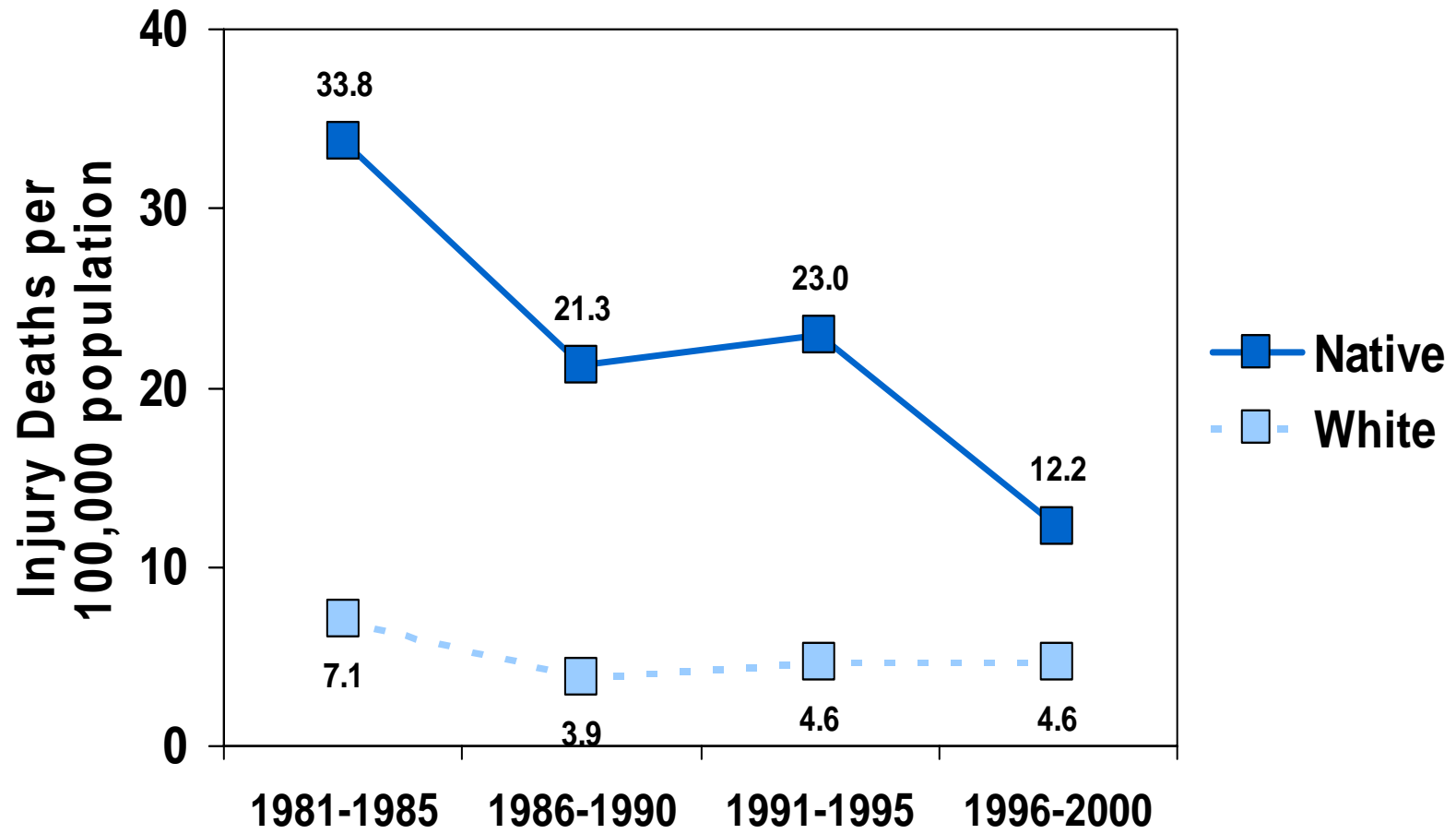


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: **Youth 0-19**, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	7.3	25	3.6	18	2.0	3.7
1986-1990	5.3	20	4.1	22	1.3	1.2
1991-1995	3.6	15	6.0	35	0.6	-2.4
1996-2000	4.1	18	5.8	35	0.7	-1.7

Trends in Homicide Rates: Racial Disparities among **Women 20-44** Alaska Residents, 1981-2000

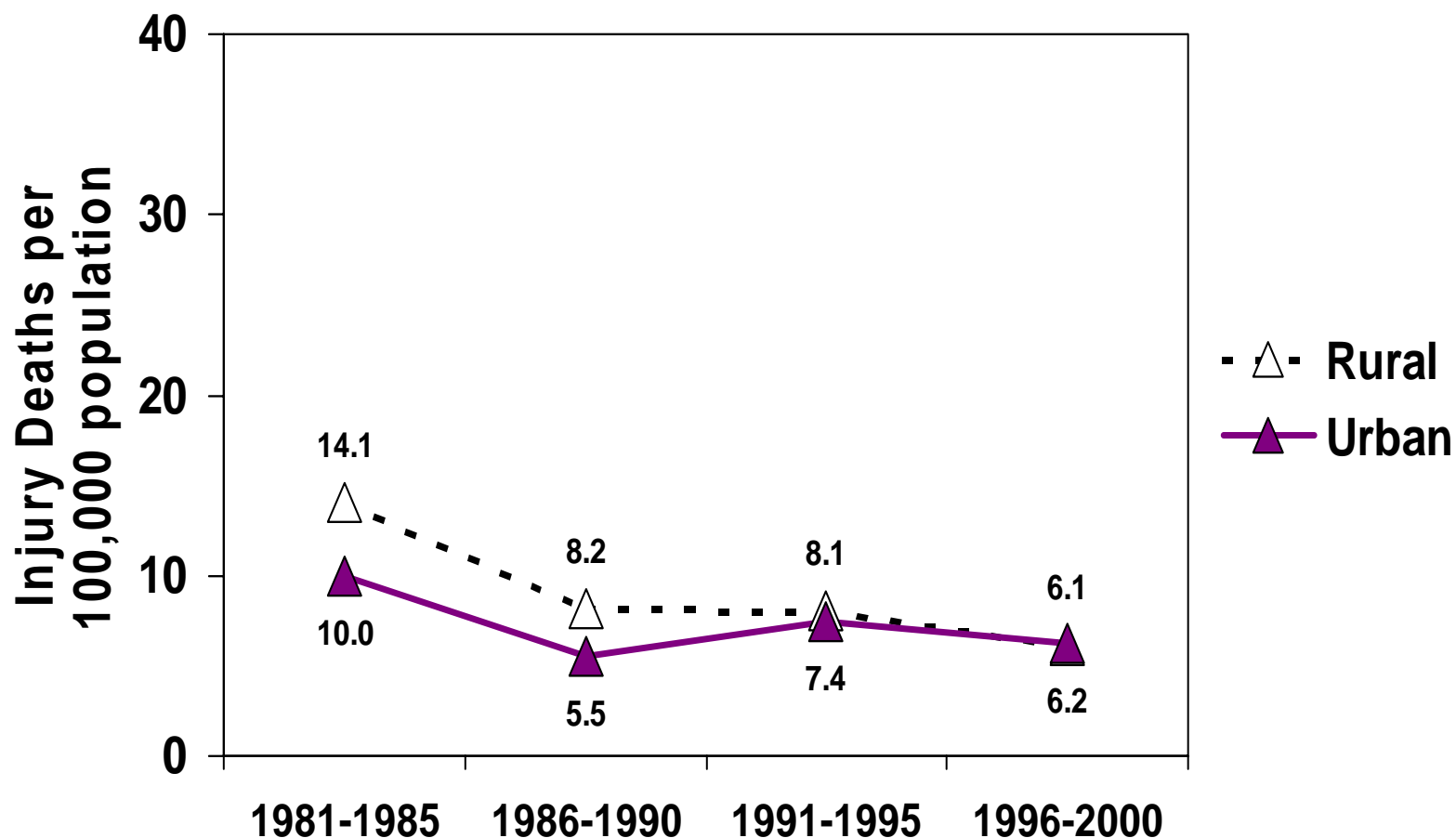


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Women 20-44***, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	33.8	23	7.1	32	4.8	26.7
1986-1990	21.3	17	3.9	19	5.5	17.4
1991-1995	23.0	20	4.6	22	5.0	18.3
1996-2000	12.2	11	4.6	20	2.6	7.6

Trends in Homicide Rates: Regional Disparities among **Women 20-44** Alaska Residents, 1981-2000

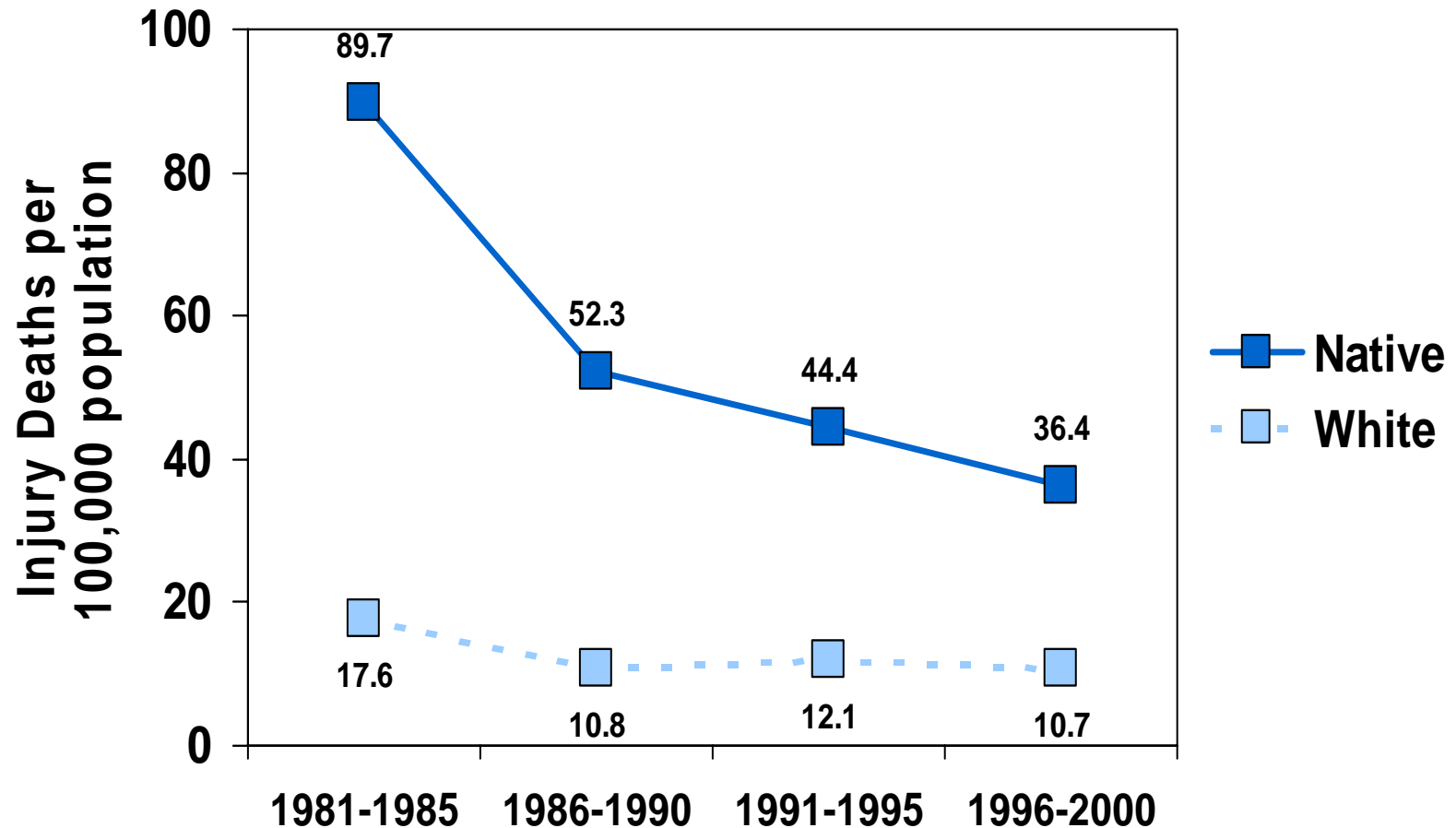


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Women 20-44***, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	14.1	27	10.0	37	1.4	4.1
1986-1990	8.2	18	5.5	22	1.5	2.7
1991-1995	8.1	18	7.4	29	1.1	0.7
1996-2000	6.1	13	6.2	23	1.0	-0.1

Trends in Homicide Rates: Racial Disparities among **Men 20-44** Alaska Residents, 1981-2000

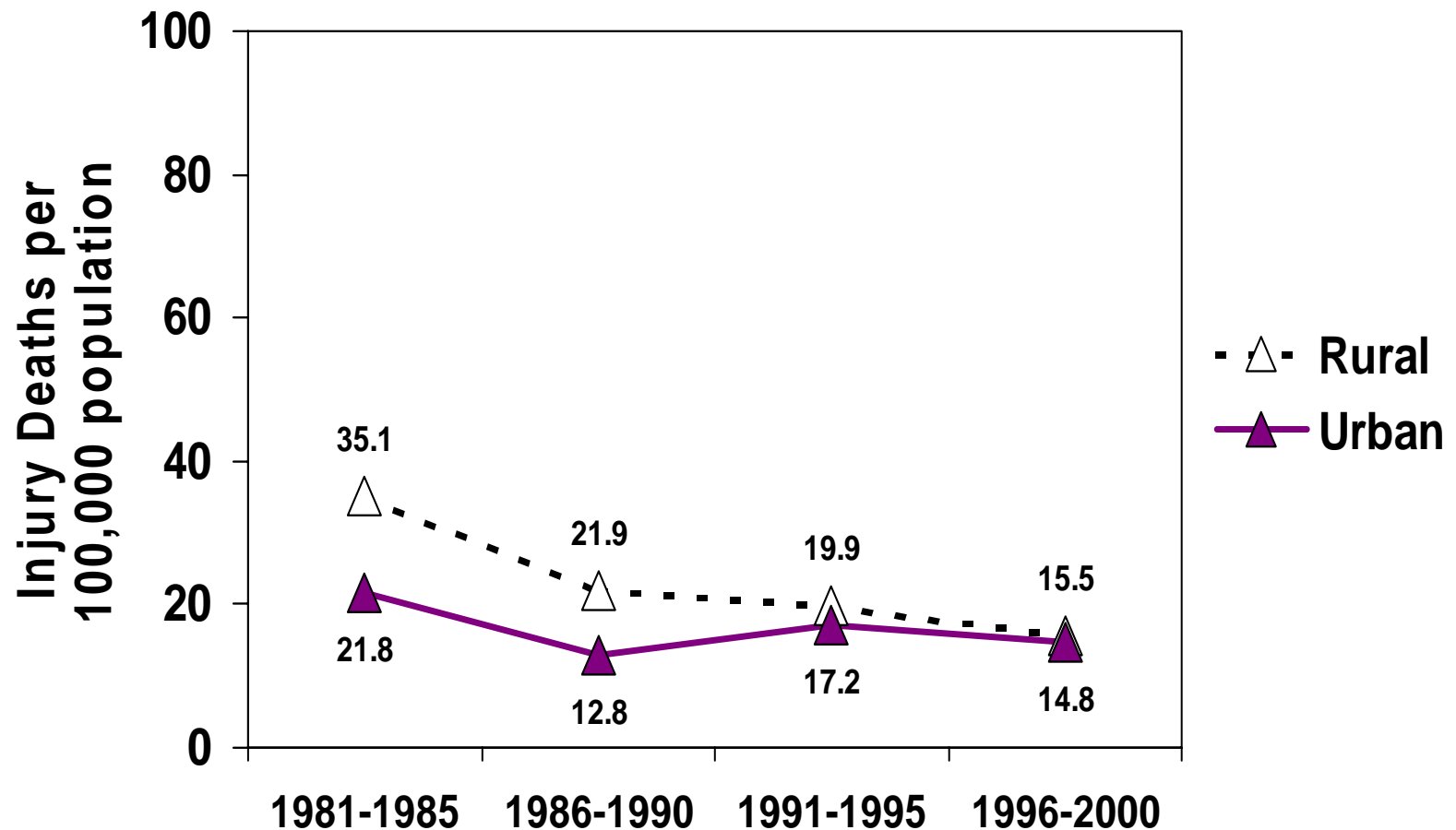


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: ***Men 20-44***, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	89.7	60	17.6	91	5.1	72.1
1986-1990	52.3	41	10.8	59	4.8	41.5
1991-1995	44.4	39	12.1	66	3.7	32.3
1996-2000	36.4	33	10.7	51	3.4	25.7

Trends in Homicide Rates: Regional Disparities among ***Men 20-44*** Alaska Residents, 1981-2000

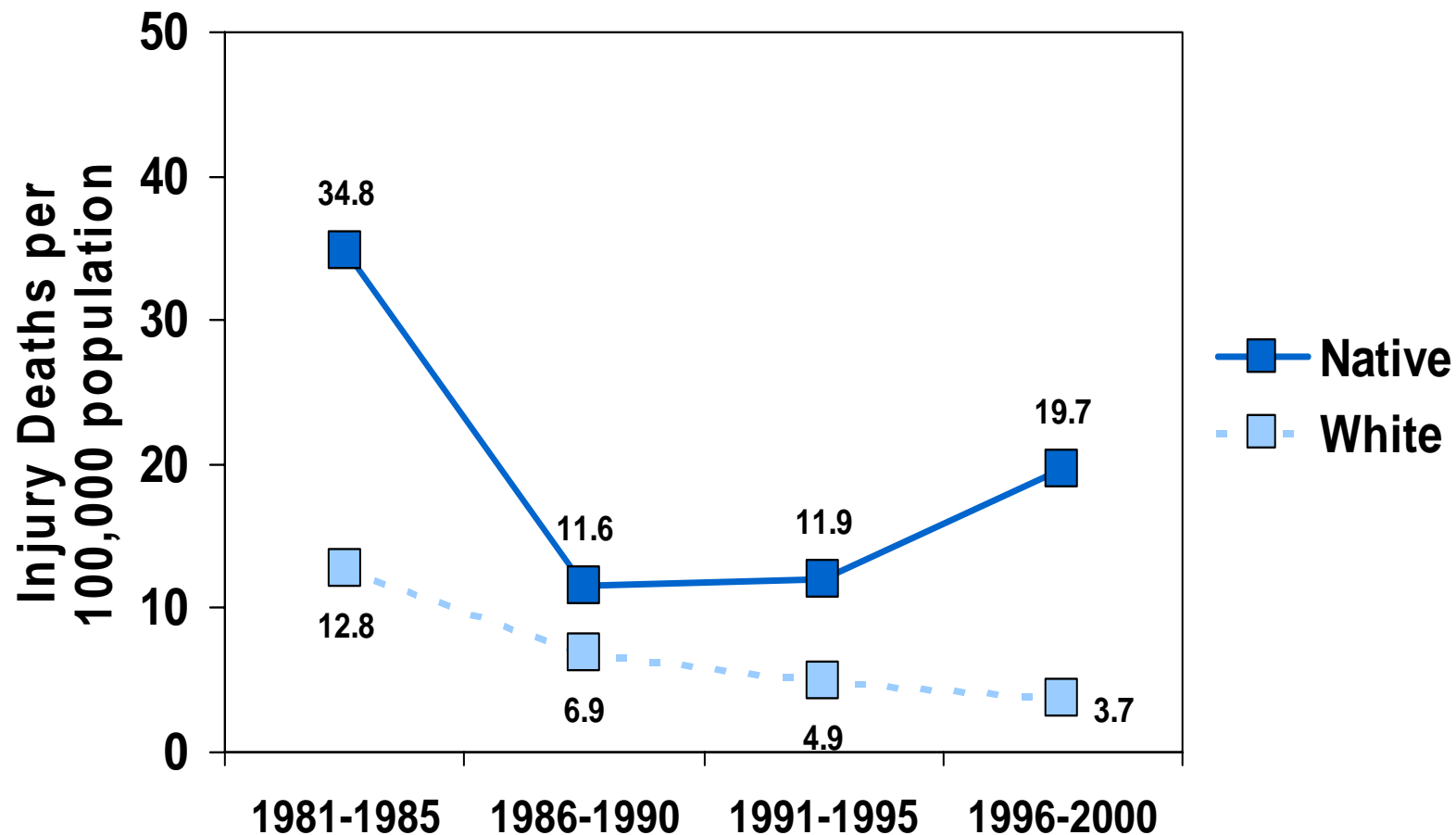


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: ***Men 20-44***, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	35.1	79	21.8	85	1.6	13.3
1986-1990	21.9	57	12.8	54	1.7	9.1
1991-1995	19.9	52	17.2	75	1.2	2.7
1996-2000	15.5	37	14.8	59	1.0	0.7

Trends in Homicide Rates: Racial Disparities among **Adults 45+** Alaska Residents, 1981-2000

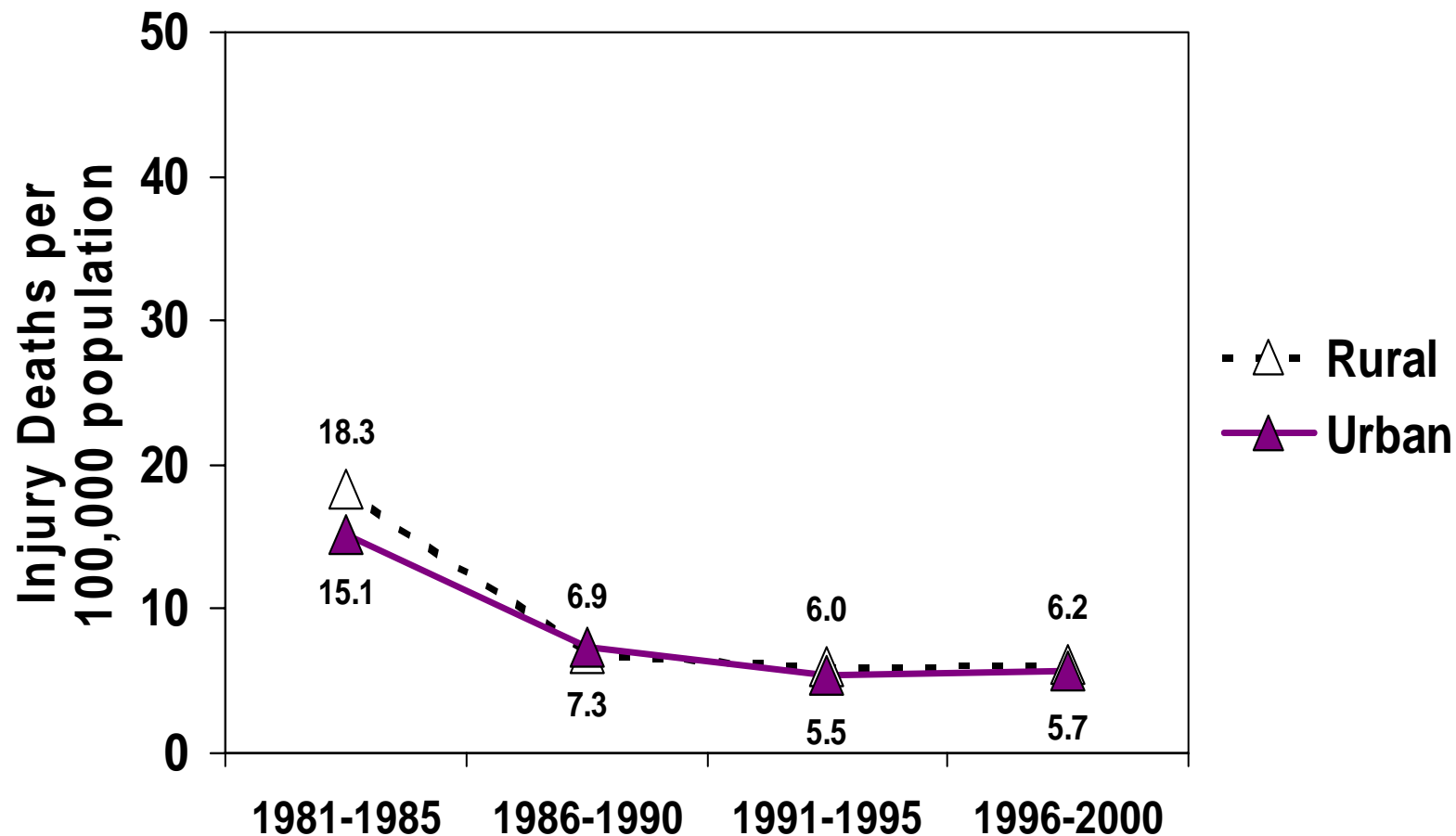


Source: DHSS/ABVS

Homicide Deaths and Death Rates by Race and Period, Native:White Rate Ratios and Native-White Rate Differences: **Adults 45+**, 1981-2000

Years	Native Rate	Native Deaths	White Rate	White Deaths	Rate Ratio (N:W)	Rate Difference (N-W)
1981-1985	34.8	21	12.8	41	2.7	22.0
1986-1990	11.6	8	6.9	27	1.7	4.7
1991-1995	11.9	10	4.9	25	2.4	7.0
1996-2000	19.7	20	3.7	24	5.3	16.0

Trends in Homicide Rates: Regional Disparities among **Adults 45+** Alaska Residents, 1981-2000



Source: DHSS/ABVS

Homicide Deaths and Death Rates by Region and Period, Rural:Urban Rate Ratios and Rural-Urban Rate Differences: **Adults 45+**, 1981-2000

Years	Rural Rate	Rural Deaths	Urban Rate	Urban Deaths	Rate Ratio (R:U)	Rate Difference (R-U)
1981-1985	18.3	30	15.1	36	1.2	3.2
1986-1990	6.9	14	7.3	21	0.9	-0.4
1991-1995	6.0	16	5.5	20	1.1	0.6
1996-2000	6.2	21	5.7	27	1.1	0.4

Summary: Trends in Homicide Disparities

- ✓ Homicide rates dropped during the 1980s among all 4 groups, and remained fairly level subsequently.
- ✓ Racial disparities decreased substantially among youth and adults 20-44; disparities among those 45 and over have begun to increase since the late 1980s.
- ✓ Regional disparities were small relative to racial disparities, and either decreased or stayed the same throughout the 20-year period.

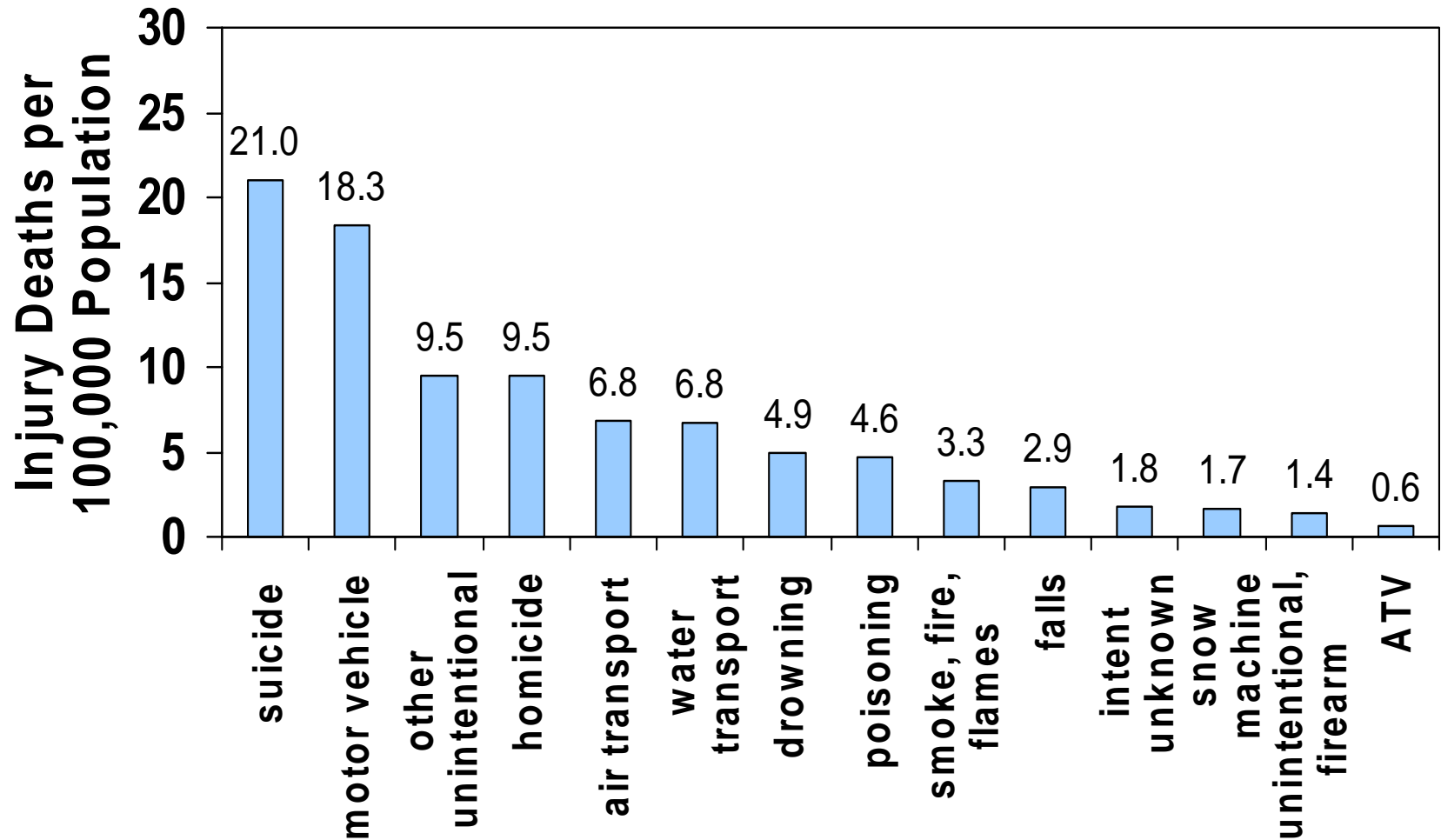
Disparities in Injury Death Rates by Specific Cause

Alaska 1981-2000

Age-Specific Rates, Rate Ratios
and Rate Differences

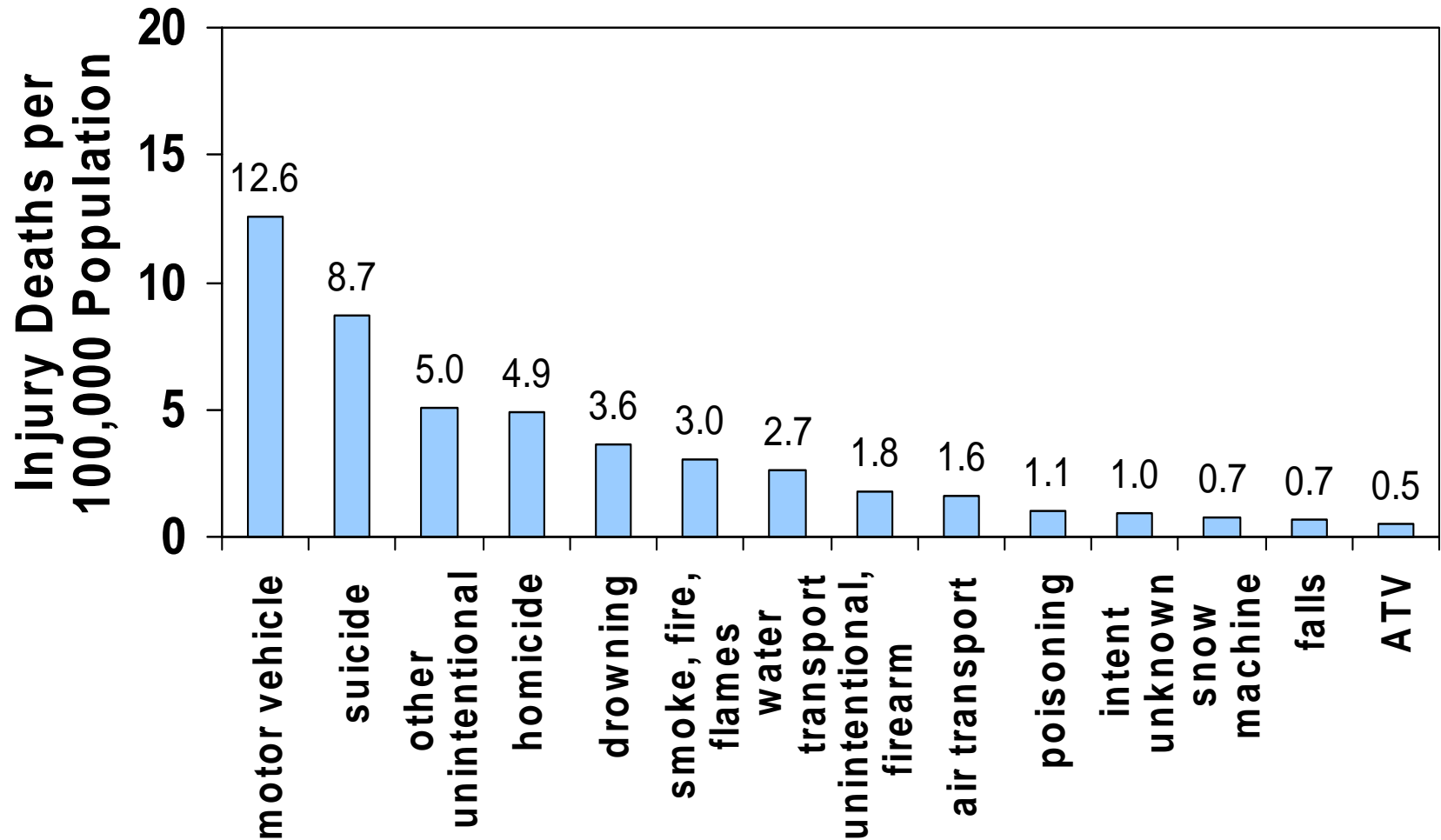
with focus on Youth (0-19), Women and Men 20-44,
and Older Adults (45 and older)

Injury Death Rates by Cause: *All Groups, 1981-2000*



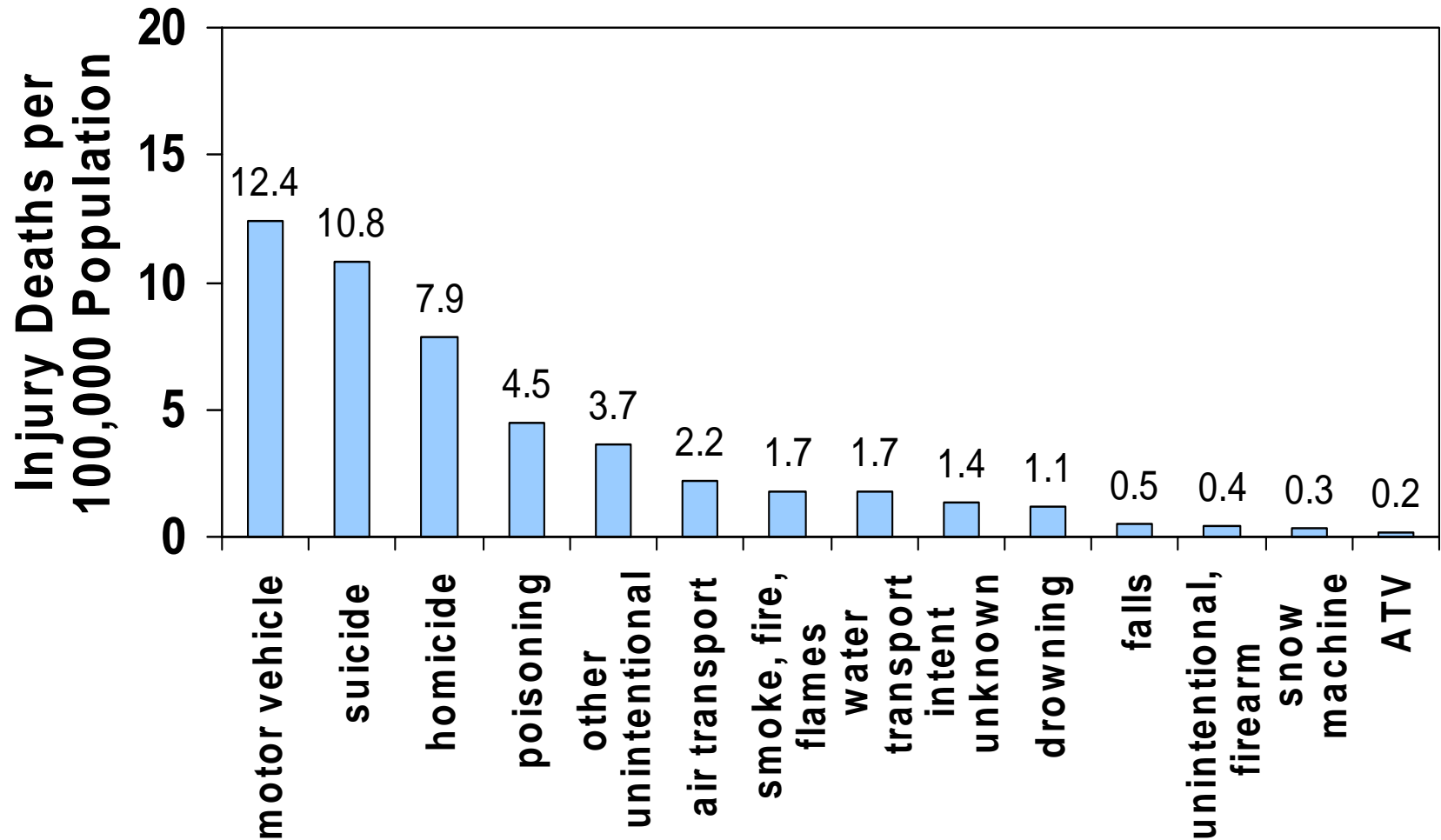
Source: DHSS/ABVS

Injury Death Rates by Specific Cause: *Youth 0-19, 1981-2000*



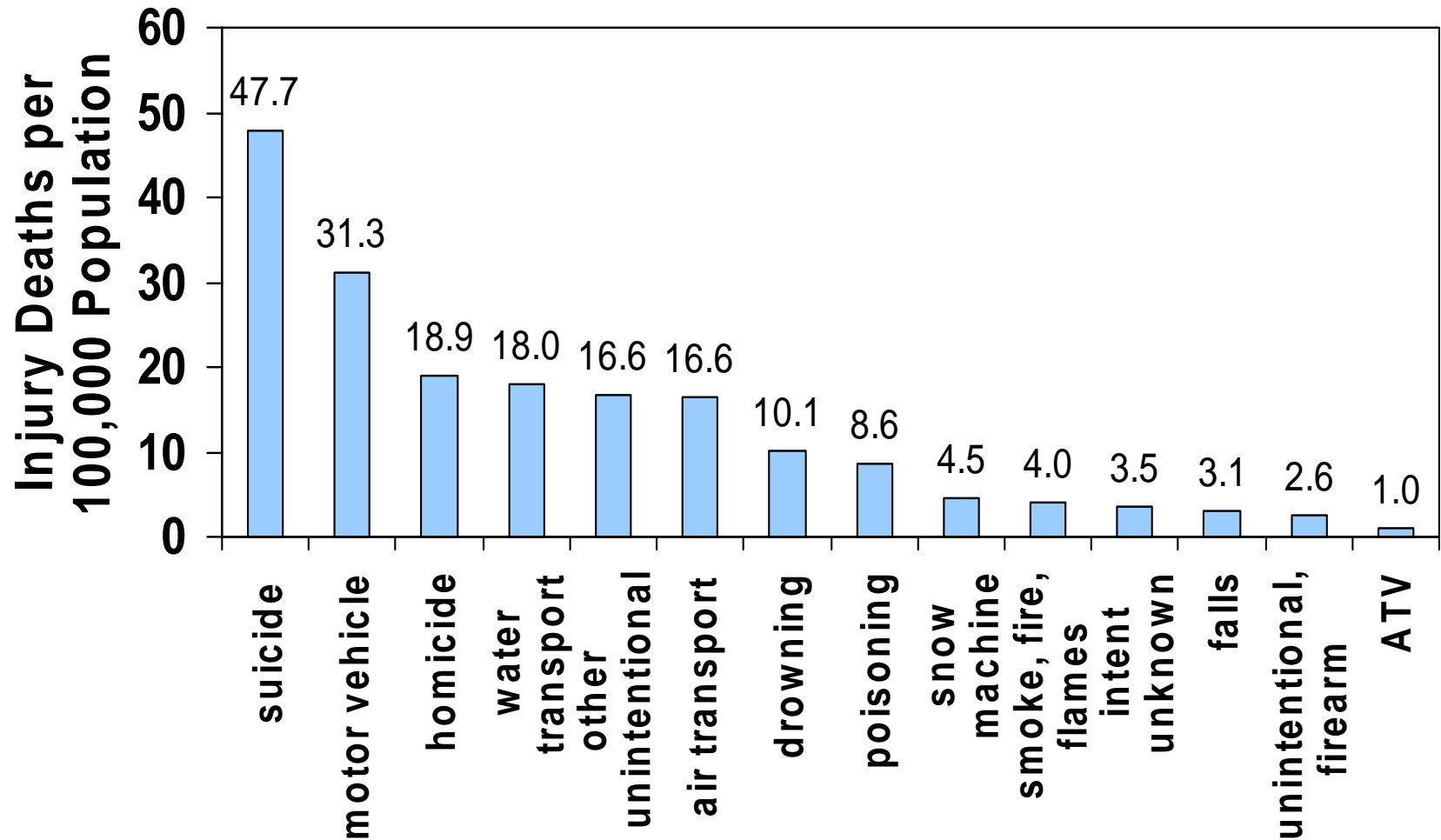
Source: DHSS/ABVS

Injury Death Rates by Specific Cause: *Women 20-44, 1981-2000*



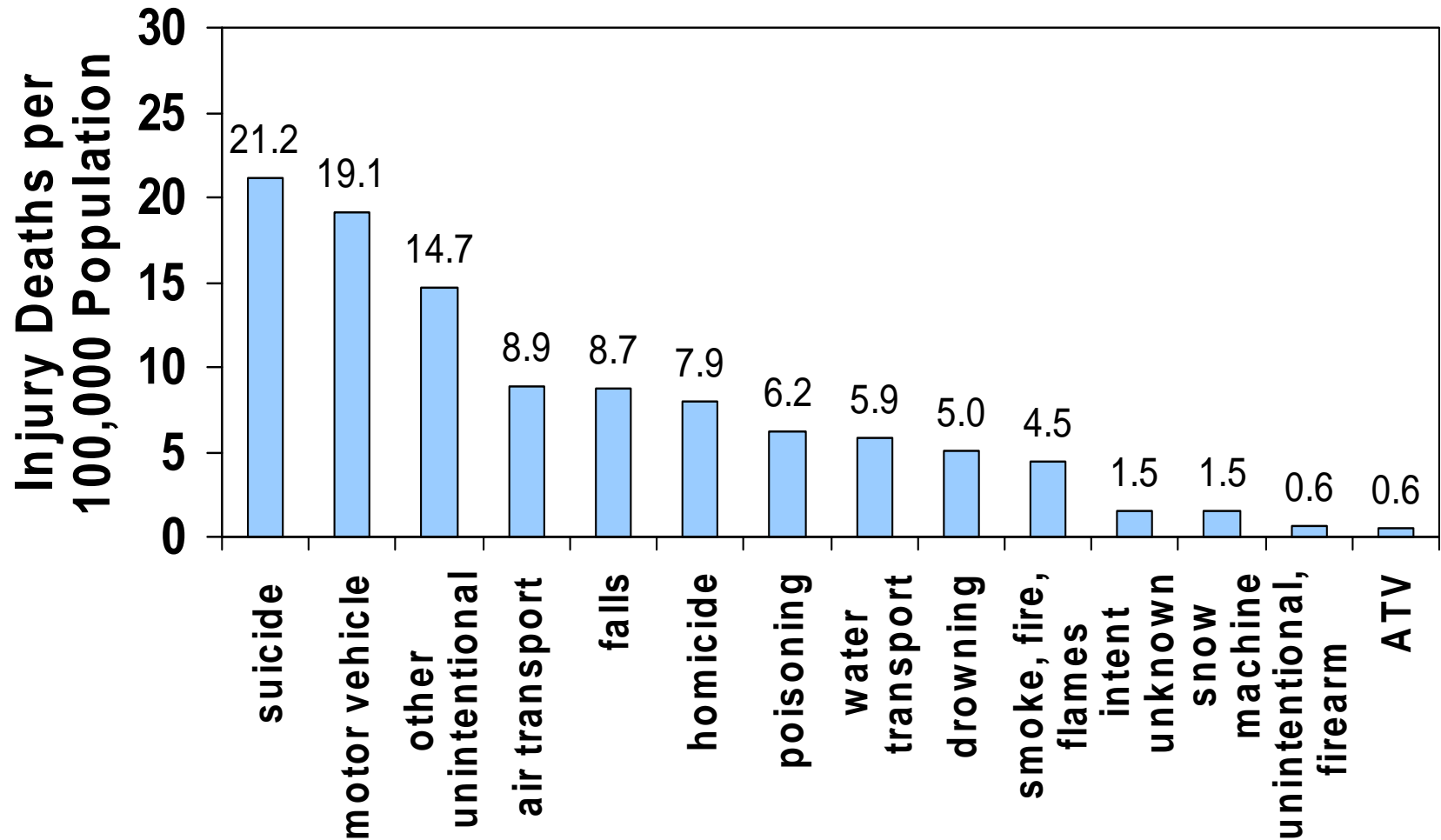
Source: DHSS/ABVS

Injury Death Rates by Cause: *Men 20-44, 1981-2000*



Source: DHSS/ABVS

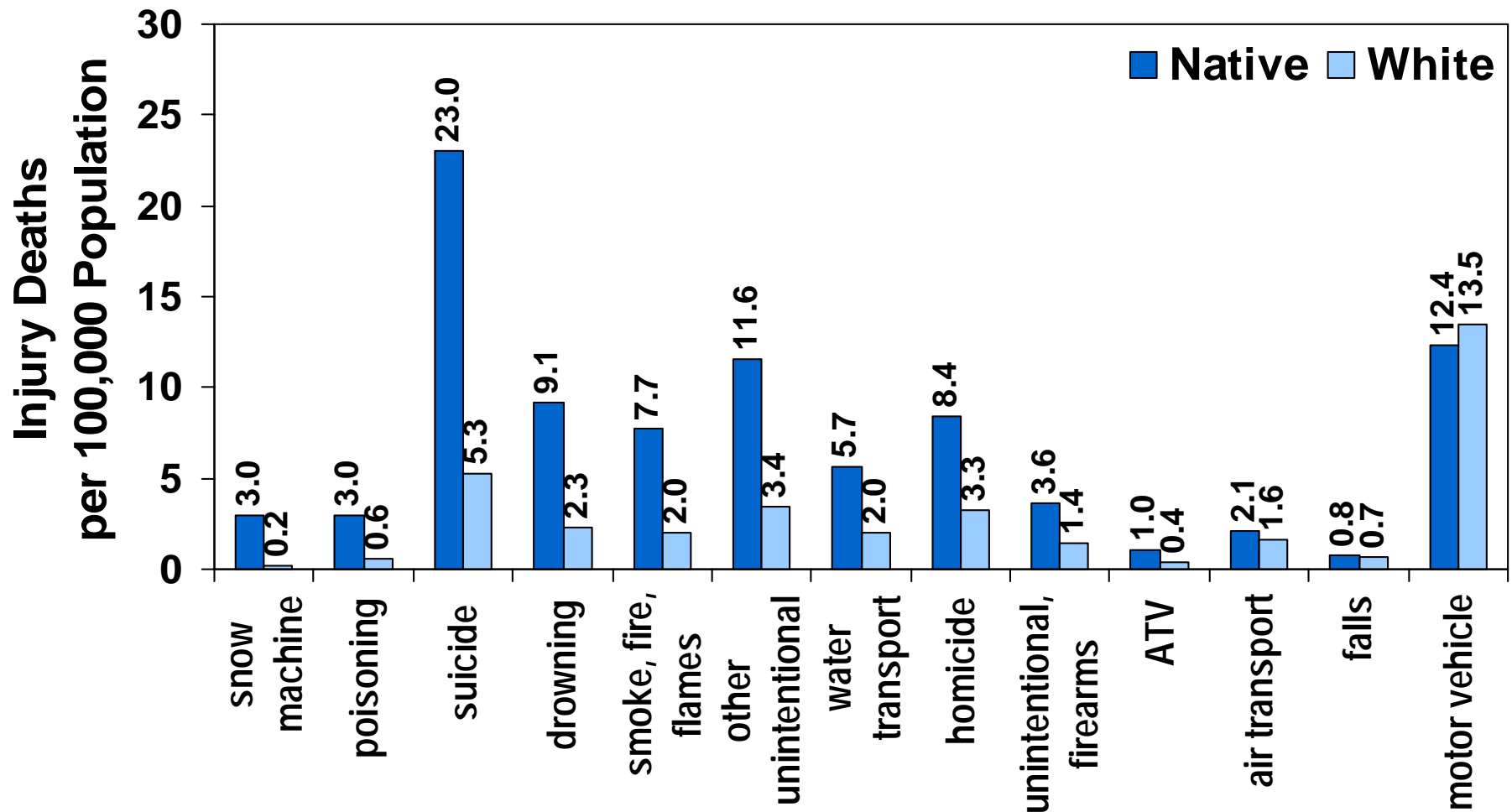
Injury Death Rates by Cause: *Adults 45+, 1981-2000*



Source: DHSS/ABVS

Injury Death Rates by Race and Cause: *Youth 0-19, 1981-2000*

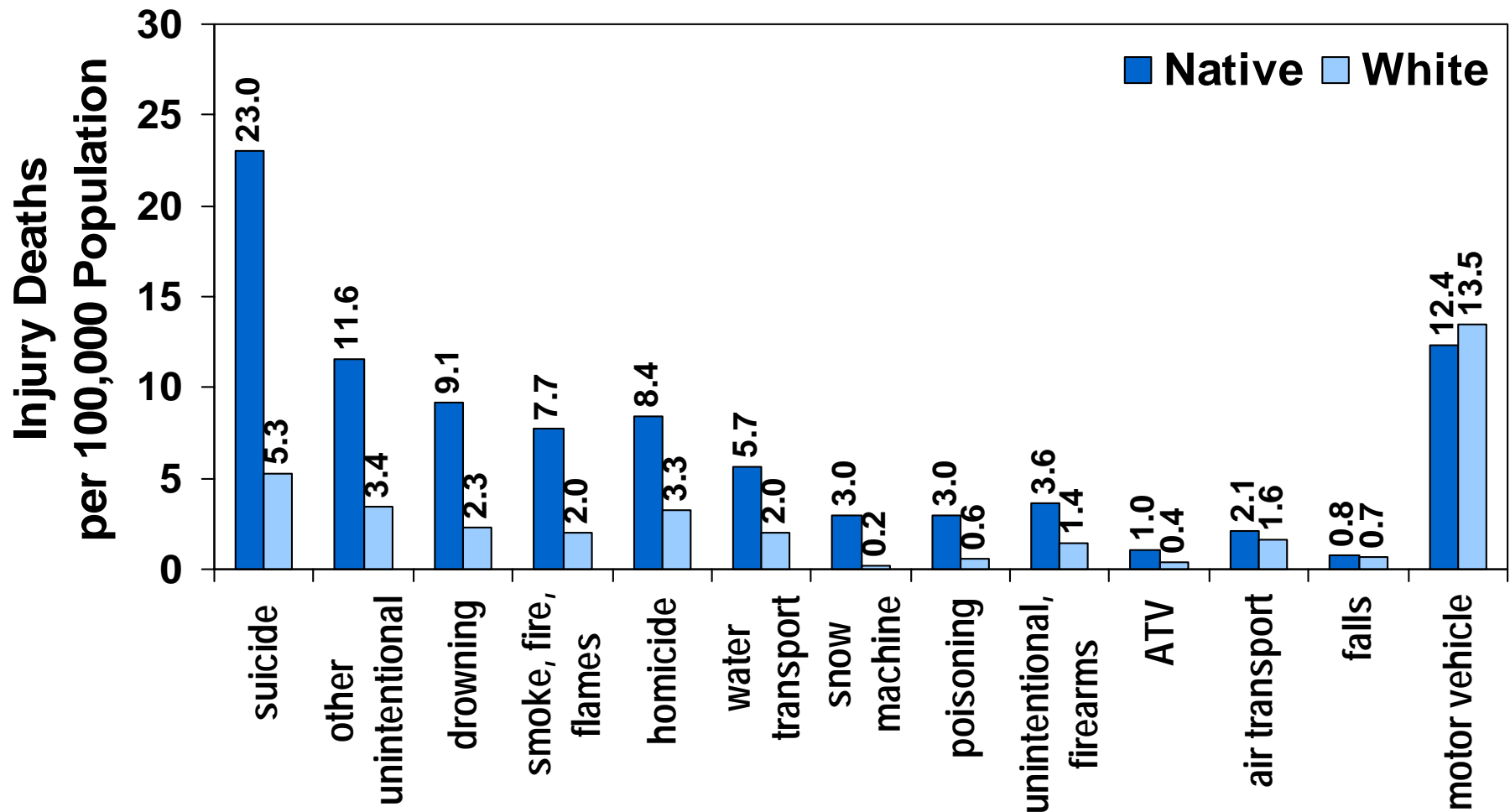
(Ordered from highest (left) to lowest Native-to-White Rate Ratio)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause: *Youth 0-19, 1981-2000*

(Ordered from highest (left) to lowest Native-to-White Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause, Native:White

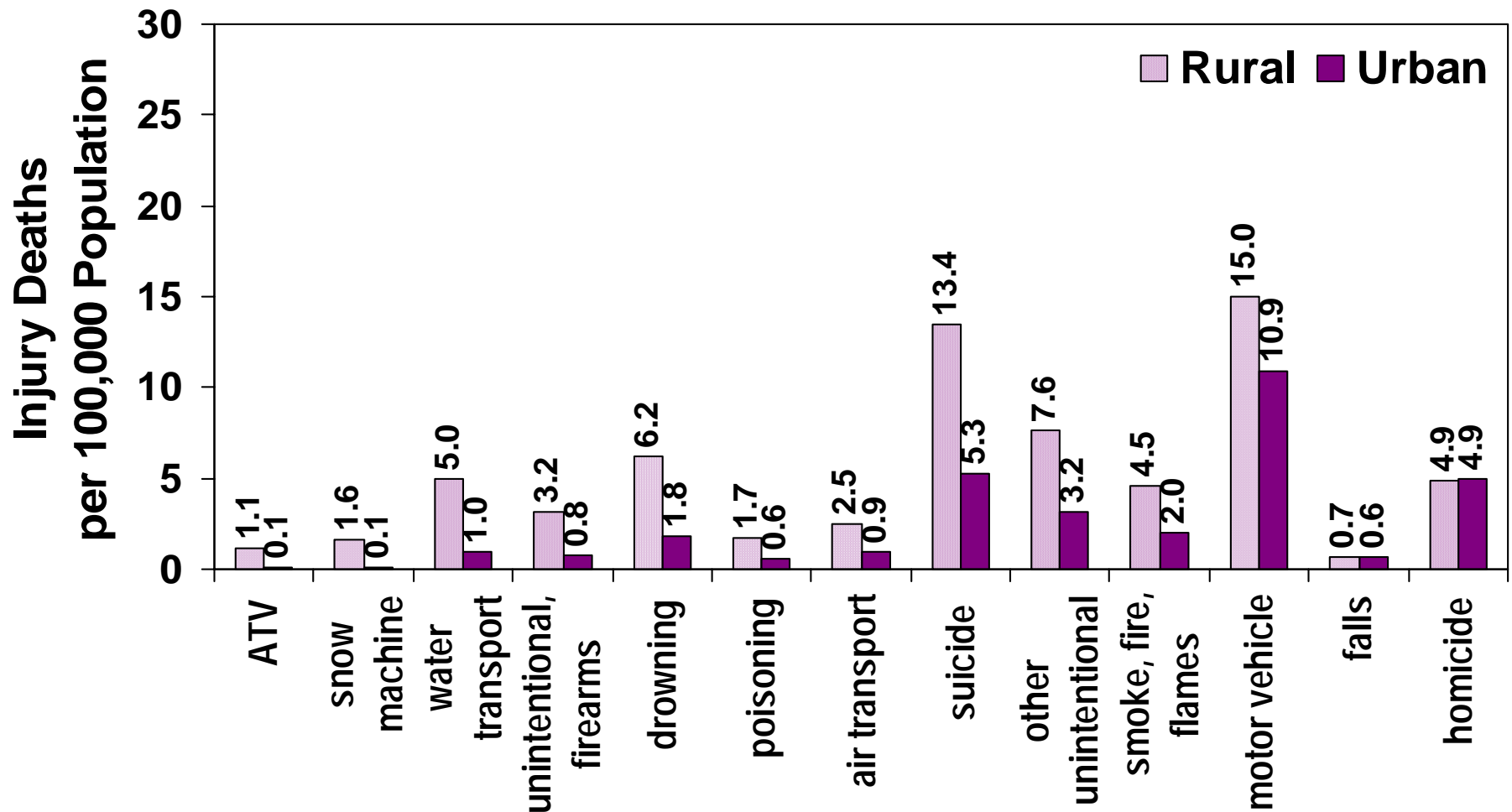
Rate Ratios and Native-White Rate Differences:

Youth 0-19, 1981-2000

Cause	Native		White		Rate Ratio (N:W)	Rate Difference (N-W)
	Count	Rate	Count	Rate		
Suicide	179	23.0	143	5.3	4.4	17.7
Motor Vehicle	96	12.4	365	13.5	0.9	-1.1
Other Unintentional	90	11.6	92	3.4	3.4	8.2
Drowning	71	9.1	61	2.3	4.1	6.9
Homicide	65	8.4	88	3.3	2.6	5.1
Smoke, Fire, Flames	60	7.7	55	2.0	3.8	5.7
Water Transport	44	5.7	55	2.0	2.8	3.6
Firearms, Unintentional	28	3.6	38	1.4	2.6	2.2
Poisoning	23	3.0	16	0.6	5.0	2.4
Snow Machine	23	3.0	4	0.2	19.7	2.8
Air Transport	16	2.1	44	1.6	1.3	0.4
ATV	8	1.0	11	0.4	2.5	0.6
Falls	6	0.8	18	0.7	1.2	0.1

Injury Death Rates by Region and Cause: *Youth 0-19, 1981-2000*

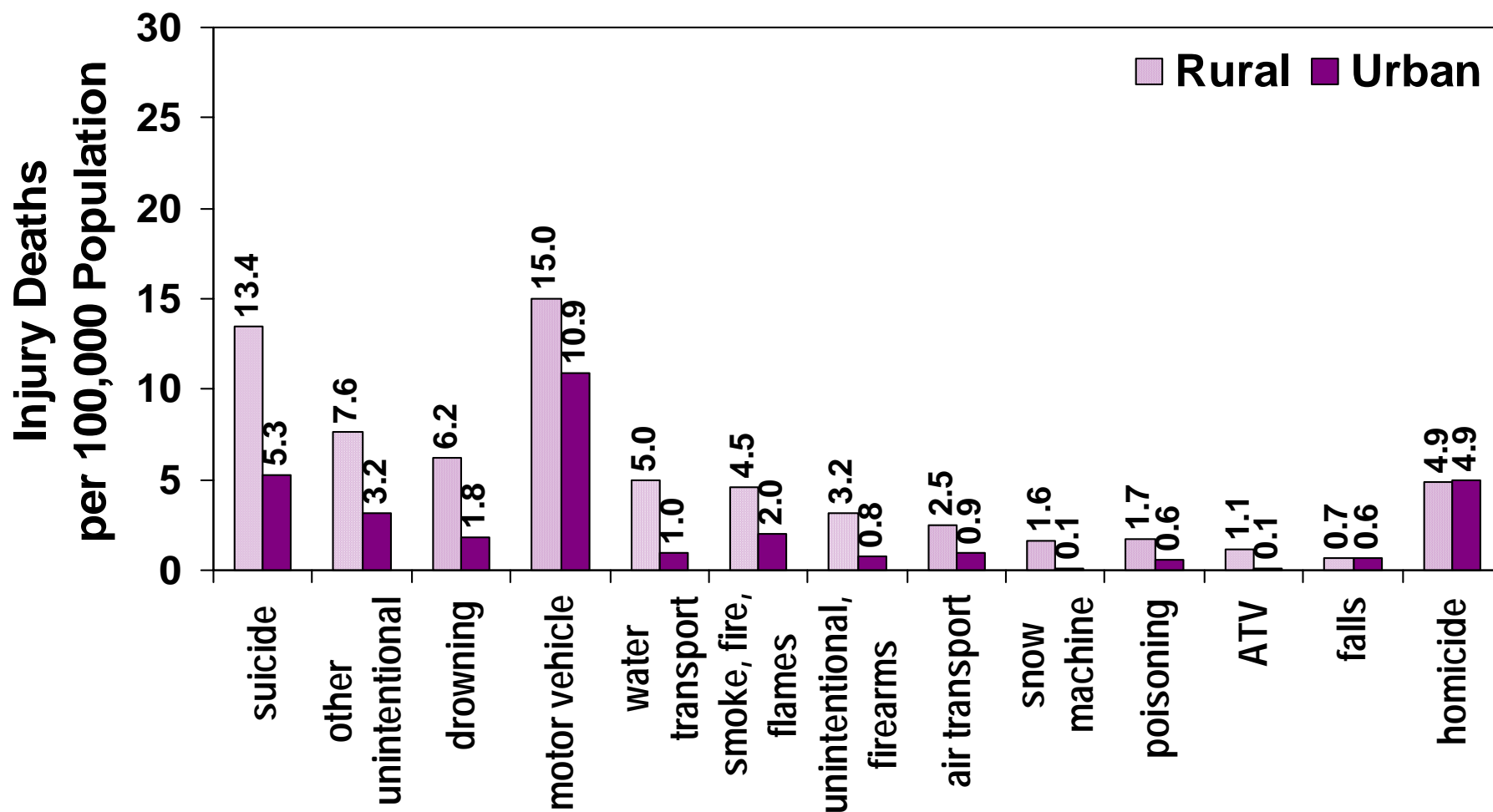
(Ordered from highest (left) to lowest Rural-to-Urban Rate Ratio)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause: *Youth 0-19, 1981-2000*

(Ordered from highest (left) to lowest Rural-to-Urban Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause, Rural:Urban

Rate Ratios and Rural-Urban Rate Differences: *Youth 0-19, 1981-2000*

Cause	Rural		Urban		Rate Ratio (R:U)	Rate Difference (R-U)
	Count	Rate	Count	Rate		
Motor Vehicle	237	15.0	243	10.9	1.4	4.1
Suicide	213	13.4	117	5.3	2.6	8.2
Other Unintentional	121	7.6	71	3.2	2.4	4.5
Drowning	98	6.2	40	1.8	3.4	4.4
Water Transport	79	5.0	22	1.0	5.0	4.0
Homicide	78	4.9	110	4.9	1.0	0.0
Smoke, Fire, Flames	72	4.5	44	2.0	2.3	2.6
Firearms, Unintentional	50	3.2	18	0.8	3.9	2.4
Air Transport	40	2.5	21	0.9	2.7	1.6
Poisoning	27	1.7	13	0.6	2.9	1.1
Snow Machine	25	1.6	3	0.1	12.2	1.5
ATV	18	1.1	2	0.1	12.7	1.1
Falls	11	0.7	14	0.6	1.1	0.1

Causes of Death with Largest Racial Disparities among Injury Death Rates, Youth 0-19

- ✓ Largest Native:White Rate Ratios:
 - ✓ Snow machine
 - ✓ Poisoning
 - ✓ Suicide
 - ✓ Drowning

- ✓ Largest Native:White Rate Differences:
 - ✓ Suicide
 - ✓ Drowning
 - ✓ Smoke/Fire/Flames
 - ✓ Homicide

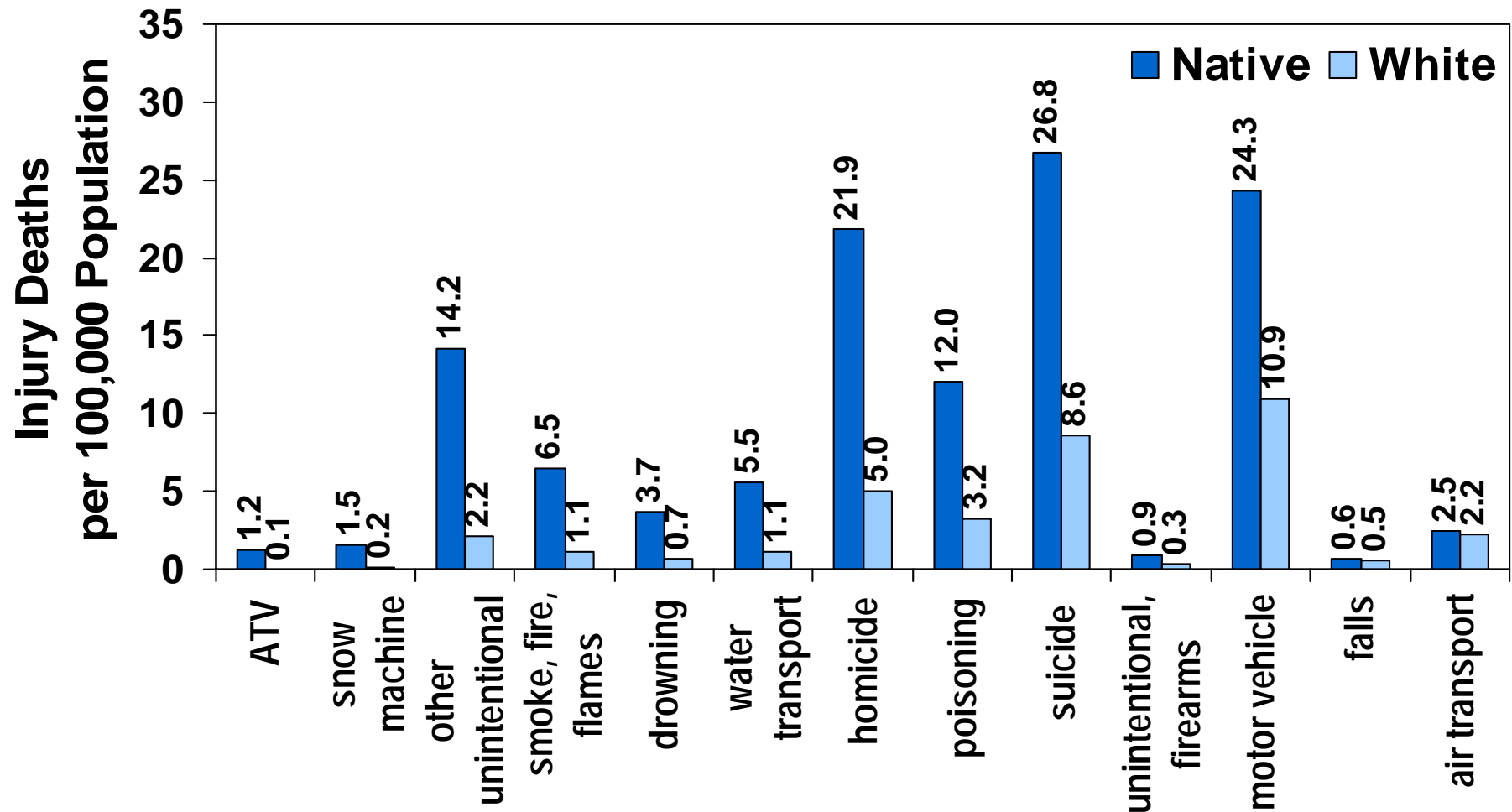
Causes of Death with Largest Regional Disparities among Injury Death Rates, **Youth 0-19**

- ✓ Largest Rural:Urban Rate Ratios:
 - ✓ ATV
 - ✓ Snow machine
 - ✓ Water transport

- ✓ Largest Rural:Urban Rate Differences:
 - ✓ Suicide
 - ✓ Drowning
 - ✓ Motor vehicle

Injury Death Rates by Race and Cause: *Women 20-44, 1981-2000*

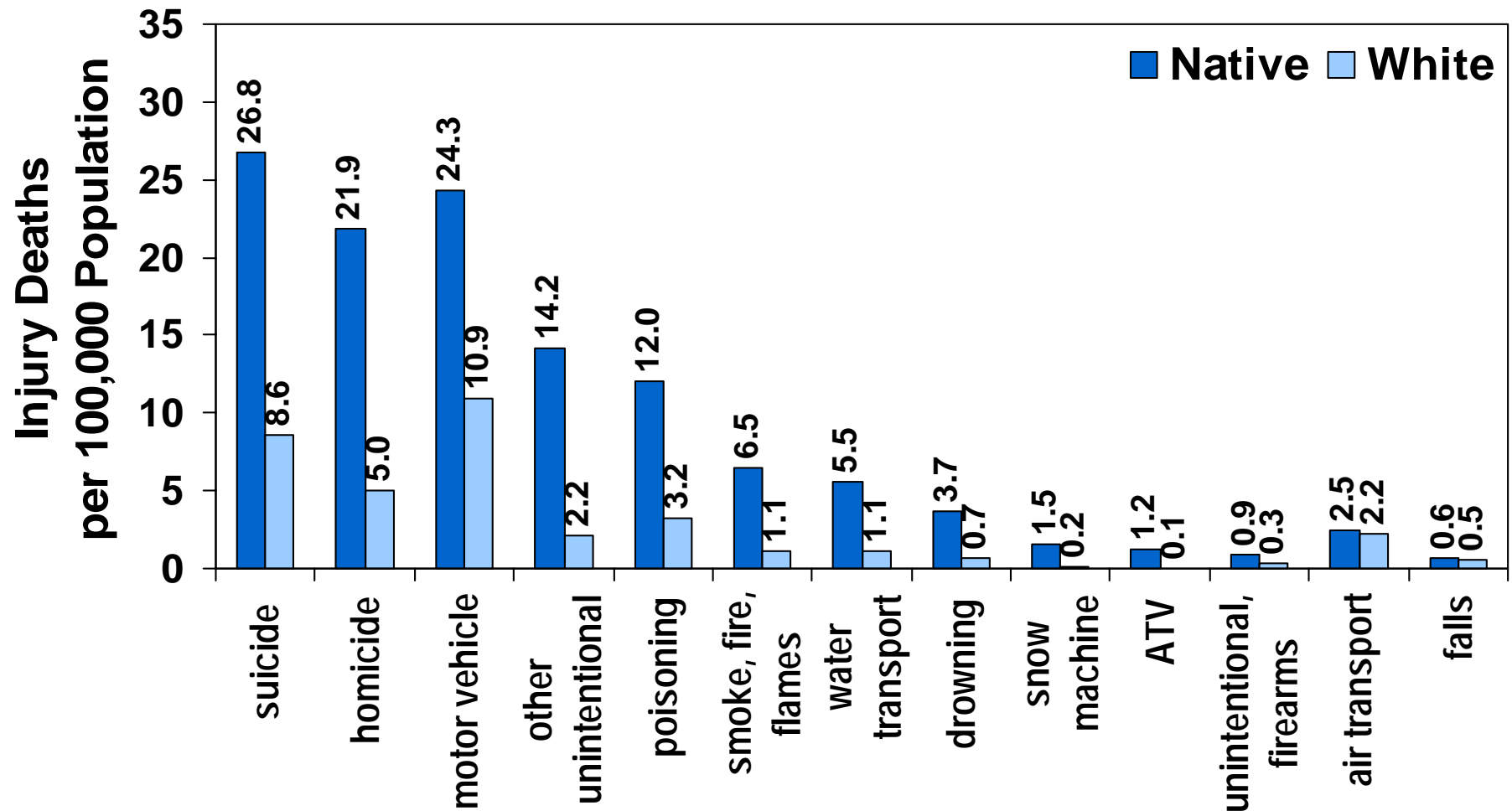
(Ordered from highest (left) to lowest Native-to-White Rate Ratio)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause: *Women 20-44, 1981-2000*

(Ordered from highest (left) to lowest Native-to-White Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause, Native:White

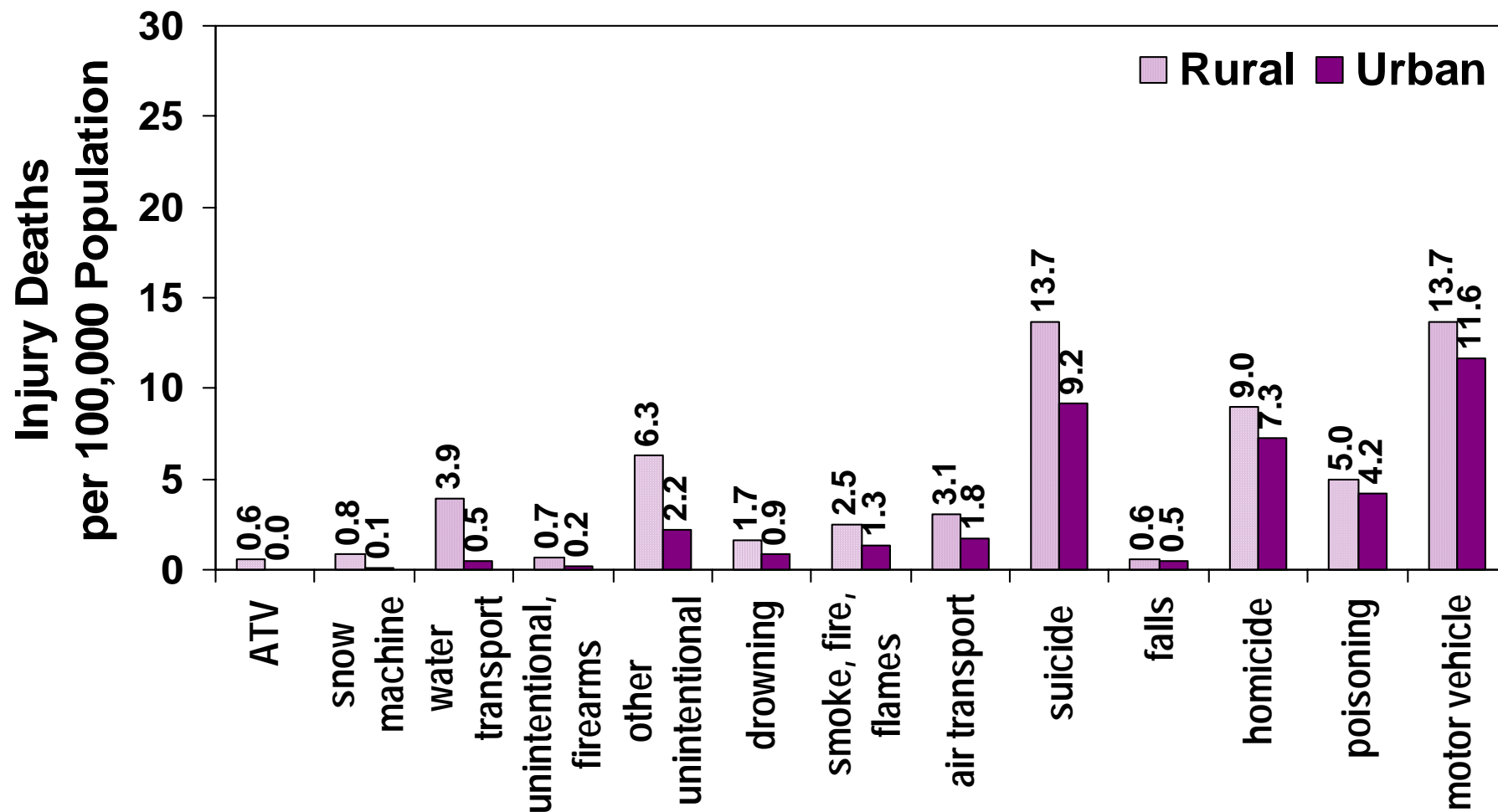
Rate Ratios and Native-White Rate Differences:

Women 20-44, 1981-2000

Cause	Native		White		Rate Ratio (N:W)	Rate Difference (N-W)
	Count	Rate	Count	Rate		
Suicide	87	26.8	159	8.6	3.1	18.2
Motor Vehicle	79	24.3	201	10.9	2.2	13.4
Homicide	71	21.9	93	5.0	4.3	16.8
Other Unintentional	46	14.2	40	2.2	6.5	12.0
Poisoning	39	12.0	59	3.2	3.8	8.8
Smoke, Fire, Flames	21	6.5	20	1.1	6.0	5.4
Water Transport	18	5.5	21	1.1	4.9	4.4
Drowning	12	3.7	13	0.7	5.3	3.0
Air Transport	8	2.5	41	2.2	1.1	0.2
Snow Machine	5	1.5	3	0.2	9.6	1.4
ATV	4	1.2	1	0.1	24.6	1.2
Firearms, Unintentional	3	0.9	6	0.3	2.9	0.6
Falls	2	0.6	10	0.5	1.1	0.1

Injury Death Rates by Region and Cause: ***Women 20-44, 1981-2000***

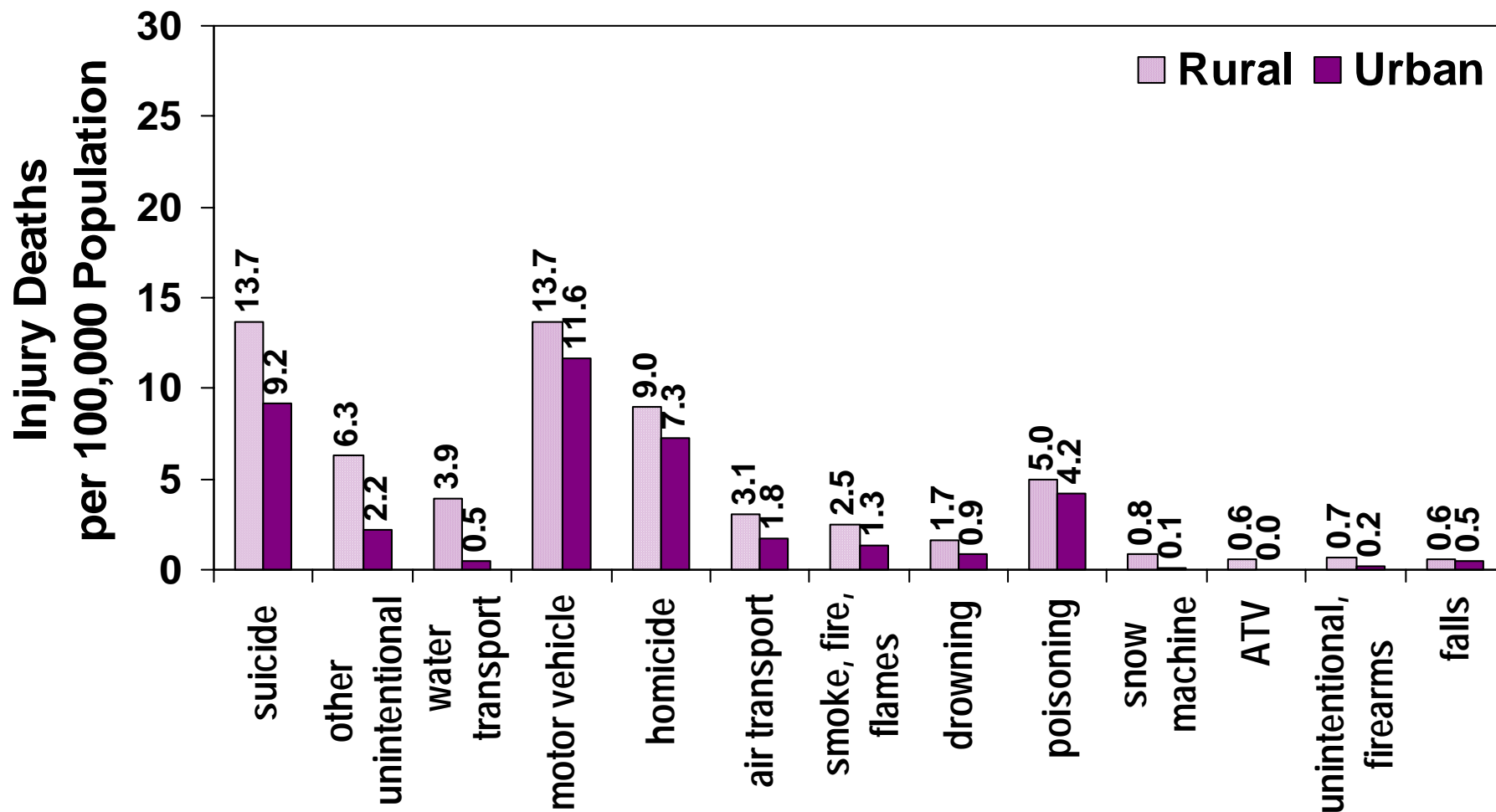
(Ordered from highest (left) to lowest Rural-to-Urban Rate Ratio)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause: *Women 20-44, 1981-2000*

(Ordered from highest (left) to lowest Rural-to-Urban Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause, Rural:Urban

Rate Ratios and Rural-Urban Rate Differences:

Women 20-44, 1981-2000

Cause	Rural		Urban		Rate Ratio (R:U)	Rate Difference (R-U)
	Count	Rate	Count	Rate		
Motor Vehicle	116	13.7	178	11.6	1.2	2.1
Suicide	116	13.7	140	9.2	1.5	4.6
Homicide	76	9.0	111	7.3	1.2	1.7
Other Unintentional	53	6.3	34	2.2	2.8	4.0
Poisoning	42	5.0	64	4.2	1.2	0.8
Water Transport	33	3.9	8	0.5	7.5	3.4
Air Transport	26	3.1	27	1.8	1.7	1.3
Smoke, Fire, Flames	21	2.5	20	1.3	1.9	1.2
Drowning	14	1.7	13	0.9	1.9	0.8
Snow Machine	7	0.8	1	0.1	11.9	0.8
Firearms, Unintentional	6	0.7	3	0.2	3.6	0.5
ATV	5	0.6	0	0.0		0.6
Falls	5	0.6	7	0.5	1.3	0.1

Causes of Death with Largest Racial Disparities among Injury Death Rates, **Women 20-44**

- ✓ Largest Native:White Rate Ratios:
 - ✓ ATV, snow machine, water transport
 - ✓ Smoke/fire/flames
 - ✓ Drowning

- ✓ Largest Native:White Rate Differences:
 - ✓ Suicide
 - ✓ Homicide
 - ✓ Motor vehicle
 - ✓ Poisoning
 - ✓ Smoke/fire/flames
 - ✓ Water transport

Causes of Death with Largest Regional Disparities among Injury Death Rates, **Women 20-44**

✓ Largest Rural:Urban Rate Ratios:

- ✓ Snow machine

- ✓ Water transport

*0 urban ATV deaths, so RR can't be calculated

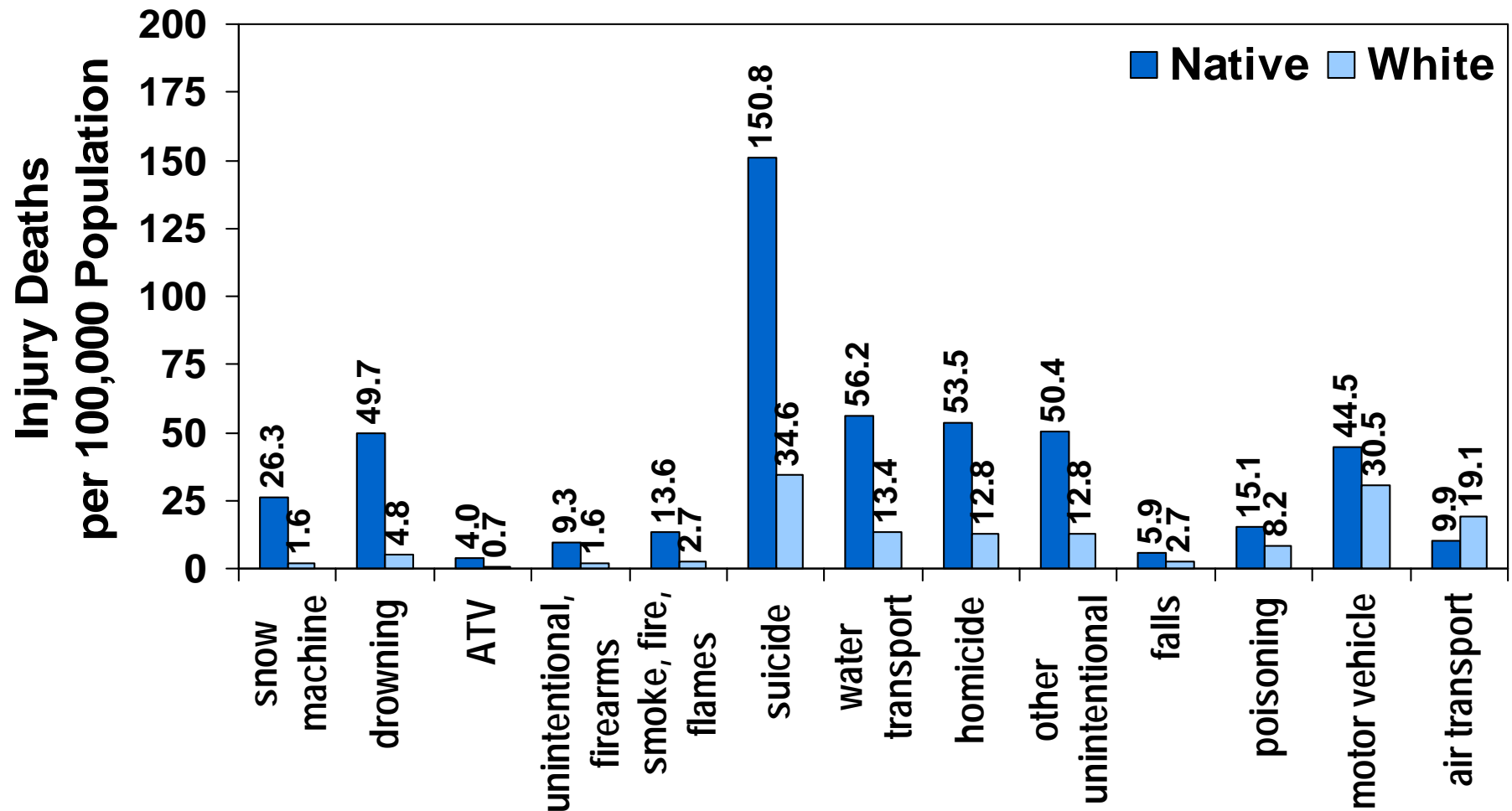
✓ Largest Rural:Urban Rate Differences:

- ✓ Suicide

- ✓ Water transport

Injury Death Rates by Race and Cause: *Men 20-44, 1981-2000*

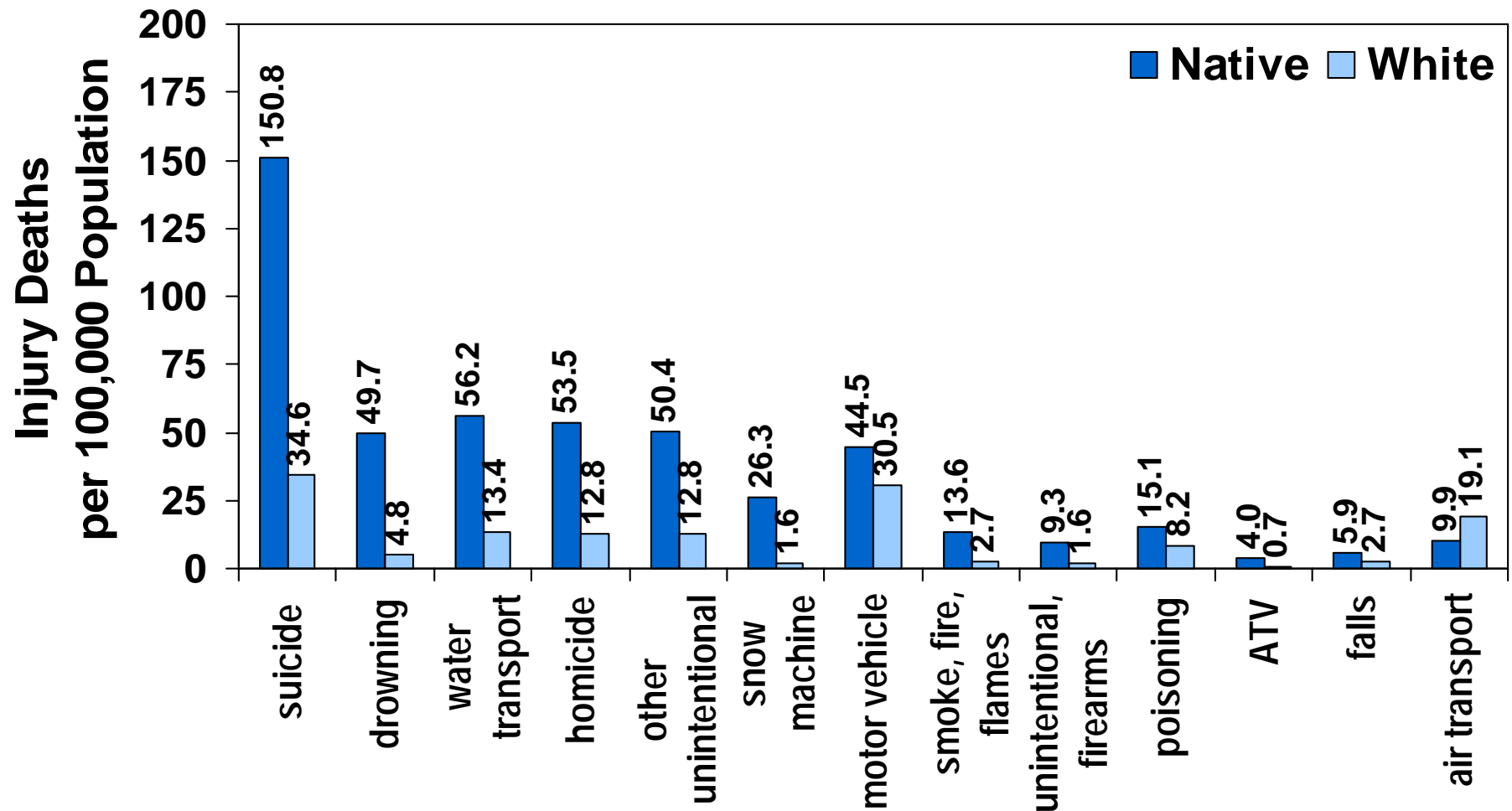
(Ordered from highest (left) to lowest Native-to-White Rate Ratio)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause: *Men 20-44, 1981-2000*

(Ordered from highest (left) to lowest Native-to-White Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause, Native:White

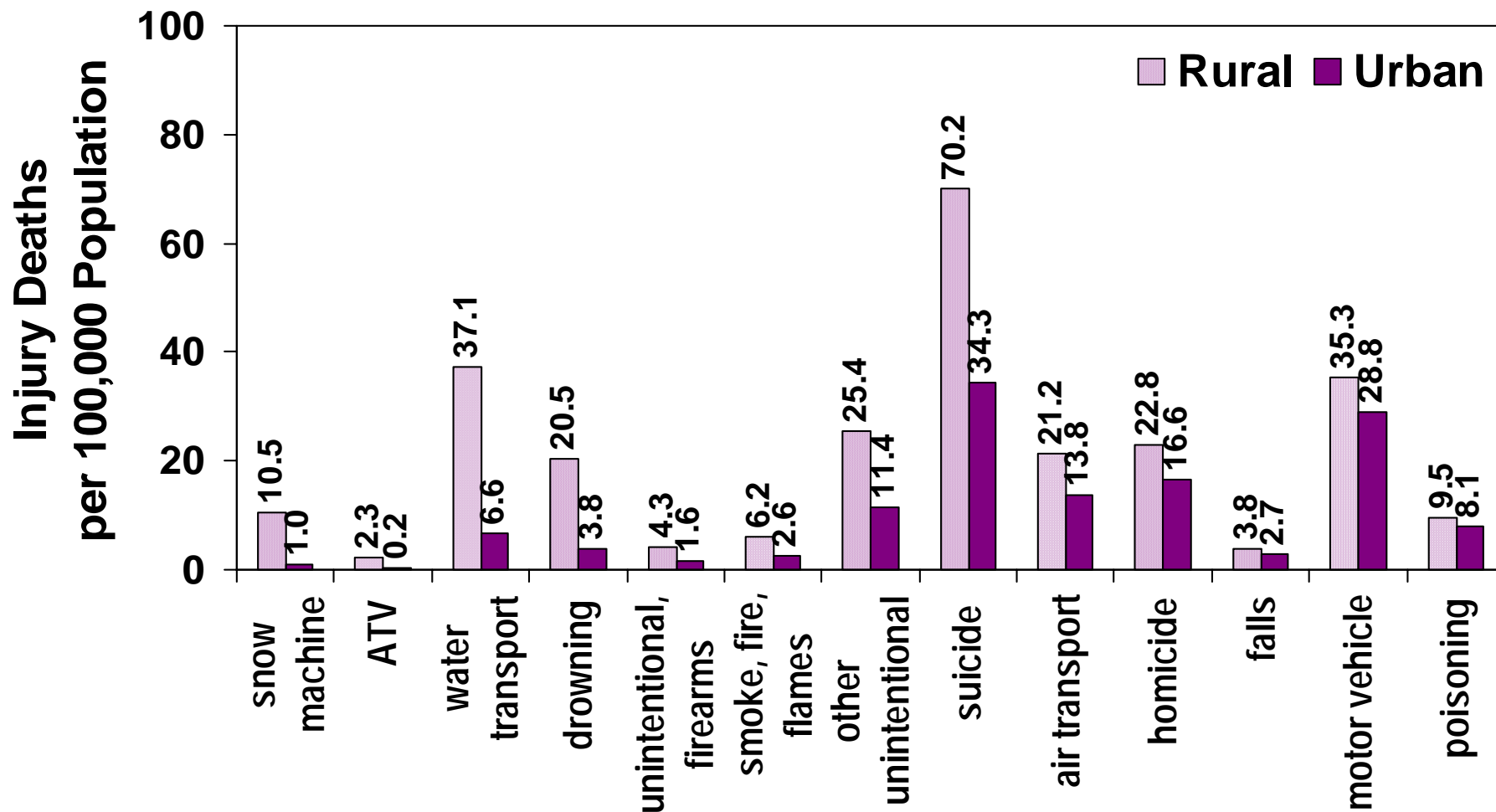
Rate Ratios and Native-White Rate Differences:

Men 20-44, 1981-2000

Cause	Native		White		Rate Ratio (N:W)	Rate Difference (N-W)
	Count	Rate	Count	Rate		
Suicide	488	150.8	721	34.6	4.4	116.2
Water Transport	182	56.2	279	13.4	4.2	42.9
Homicide	173	53.5	267	12.8	4.2	40.7
Other Unintentional	163	50.4	266	12.8	3.9	37.6
Drowning	161	49.7	101	4.8	10.3	44.9
Motor Vehicle	144	44.5	636	30.5	1.5	14.0
Snow Machine	85	26.3	34	1.6	16.1	24.6
Poisoning	49	15.1	171	8.2	1.8	6.9
Smoke, Fire, Flames	44	13.6	57	2.7	5.0	10.9
Air Transport	32	9.9	398	19.1	0.5	-9.2
Firearms, Unintentional	30	9.3	34	1.6	5.7	7.6
Falls	19	5.9	57	2.7	2.2	3.1
ATV	13	4.0	14	0.7	6.0	3.4

Injury Death Rates by Region and Cause: *Men 20-44, 1981-2000*

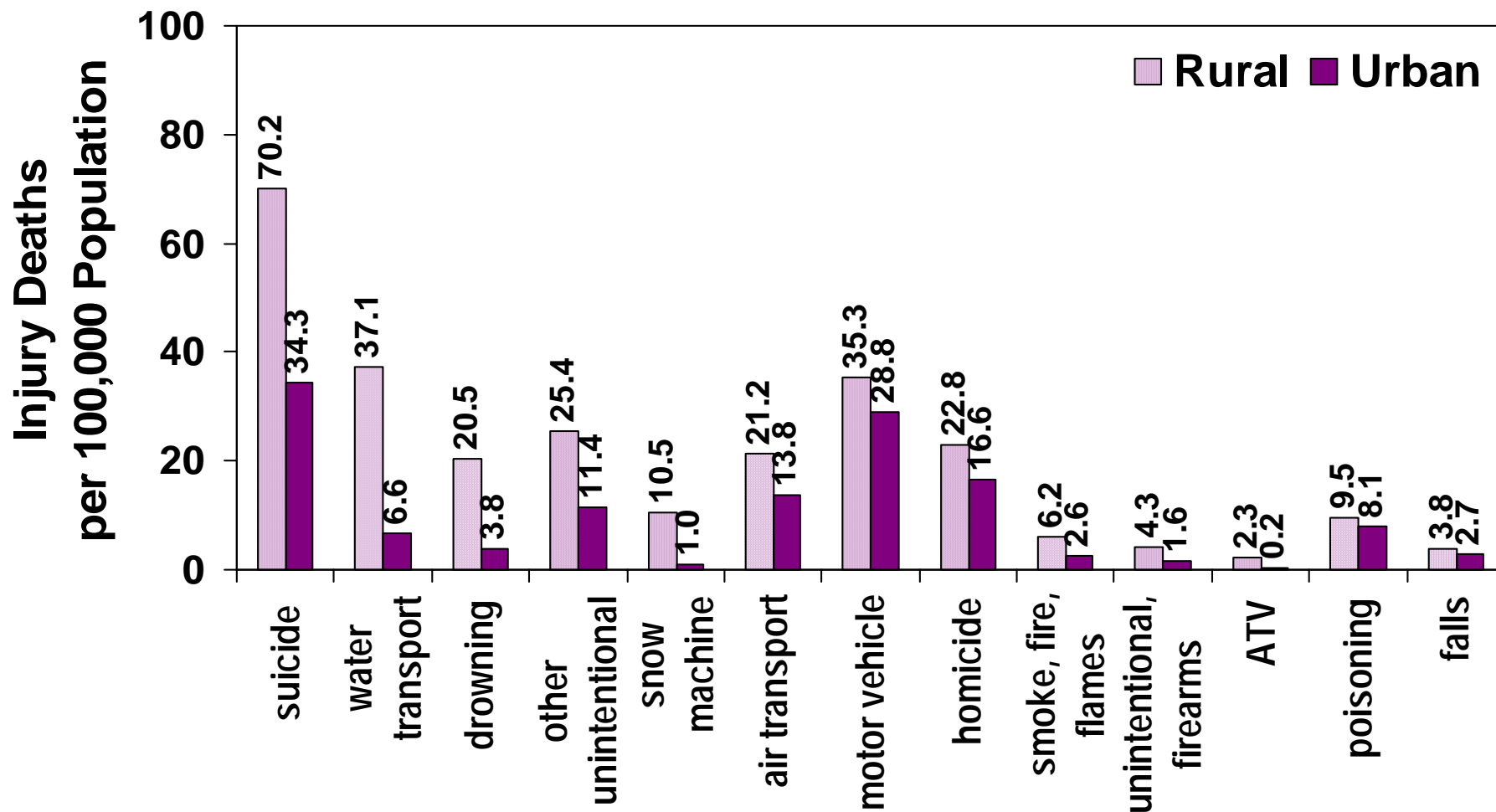
(Ordered from highest (left) to lowest Rural-to-Urban Rate Ratio)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause: *Men 20-44, 1981-2000*

(Ordered from highest (left) to lowest Rural-to-Urban Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause, Native:White

Rate Ratios and Native-White Rate Differences:

Men 20-44, 1981-2000

Cause	Rural		Urban		Rate Ratio (R:U)	Rate Difference (R-U)
	Count	Rate	Count	Rate		
Suicide	692	70.2	565	34.3	2.0	35.9
Water Transport	366	37.1	108	6.6	5.7	30.6
Motor Vehicle	348	35.3	475	28.8	1.2	6.5
Other Unintentional	250	25.4	187	11.4	2.2	14.0
Homicide	225	22.8	273	16.6	1.4	6.2
Air Transport	209	21.2	227	13.8	1.5	7.4
Drowning	202	20.5	63	3.8	5.3	16.7
Snow Machine	103	10.5	16	1.0	10.8	9.5
Poisoning	94	9.5	133	8.1	1.2	1.5
Smoke, Fire, Flames	61	6.2	43	2.6	2.4	3.6
Firearms, Unintentional	42	4.3	26	1.6	2.7	2.7
Falls	37	3.8	45	2.7	1.4	1.0
ATV	23	2.3	4	0.2	9.7	2.1

Causes of Death with Largest Racial Disparities among Injury Death Rates, Men 20-44

- ✓ Largest Native:White Rate Ratios:
 - ✓ Snow machine
 - ✓ Drowning
 - ✓ ATV
 - ✓ Unintentional, firearms
 - ✓ Smoke/fire/flames

- ✓ Largest Native:White Rate Differences:
 - ✓ Suicide
 - ✓ Drowning
 - ✓ Water transport
 - ✓ Homicide

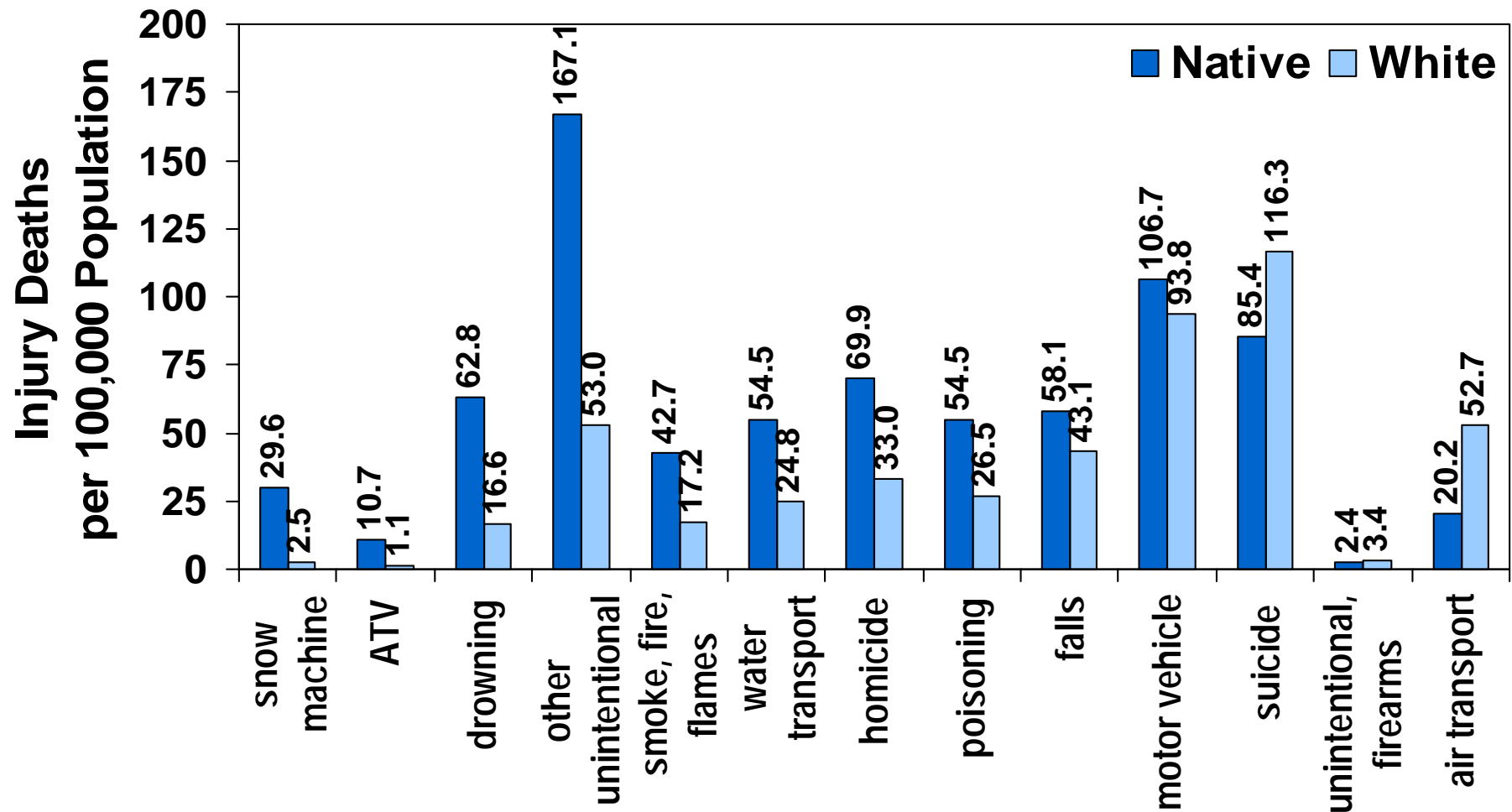
Causes of Death with Largest Regional Disparities among Injury Death Rates, **Men 20-44**

- ✓ Largest Rural:Urban Rate Ratios:
 - ✓ Snow machine
 - ✓ ATV
 - ✓ Water transport
 - ✓ Drowning

- ✓ Largest Rural:Urban Rate Differences:
 - ✓ Suicide
 - ✓ Water transport
 - ✓ Drowning
 - ✓ Snow machine
 - ✓ Air transport

Injury Death Rates by Race and Cause: ***Adults 45+, 1981-2000***

(Ordered from highest (left) to lowest Native-to-White Rate Ratio)

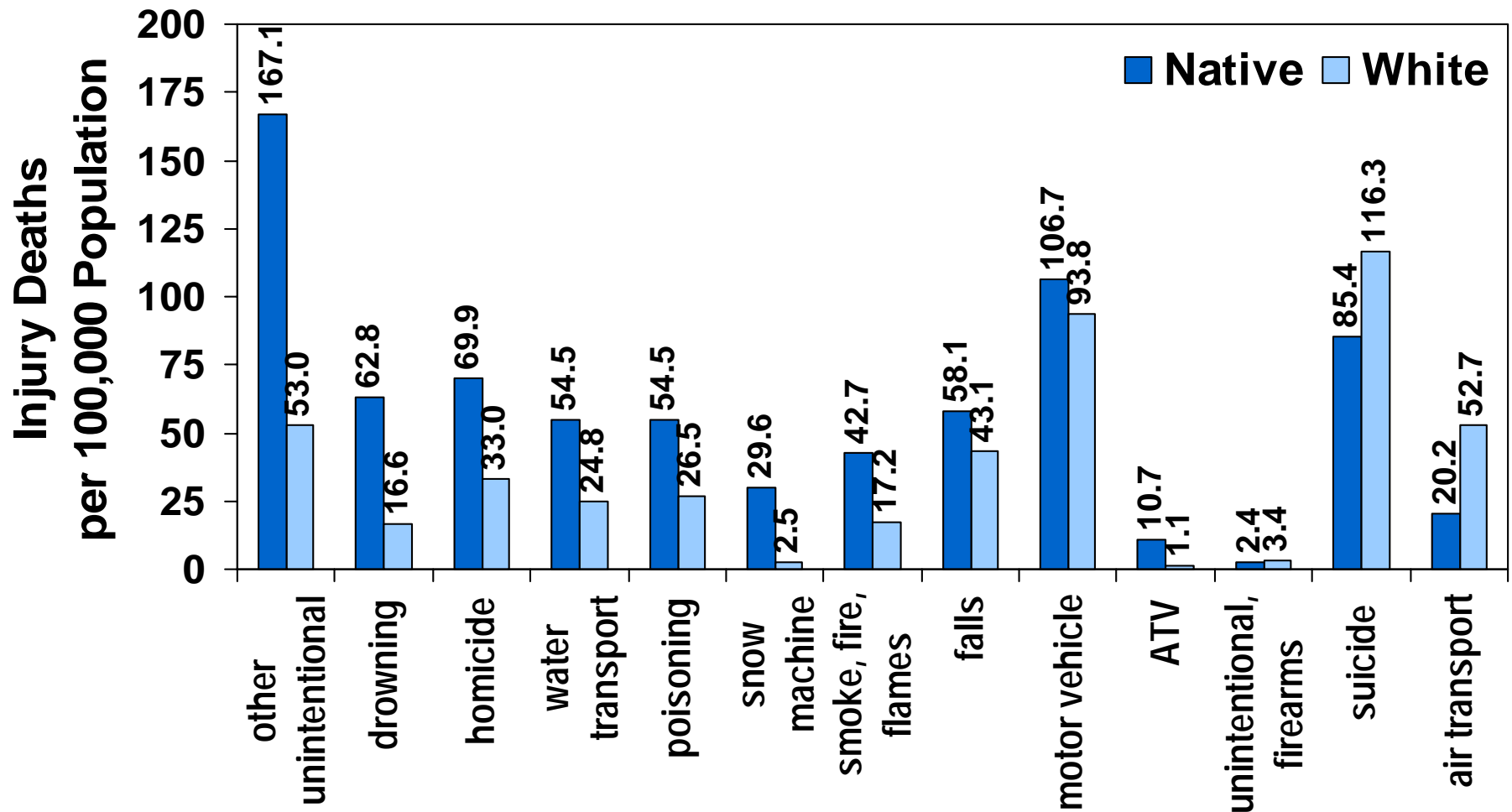


Source: DHSS/ABVS

Injury Death Rates by Race and Cause:

Adults 45+, 1981-2000

(Ordered from highest (left) to lowest Native-to-White Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Race and Cause, Native:White

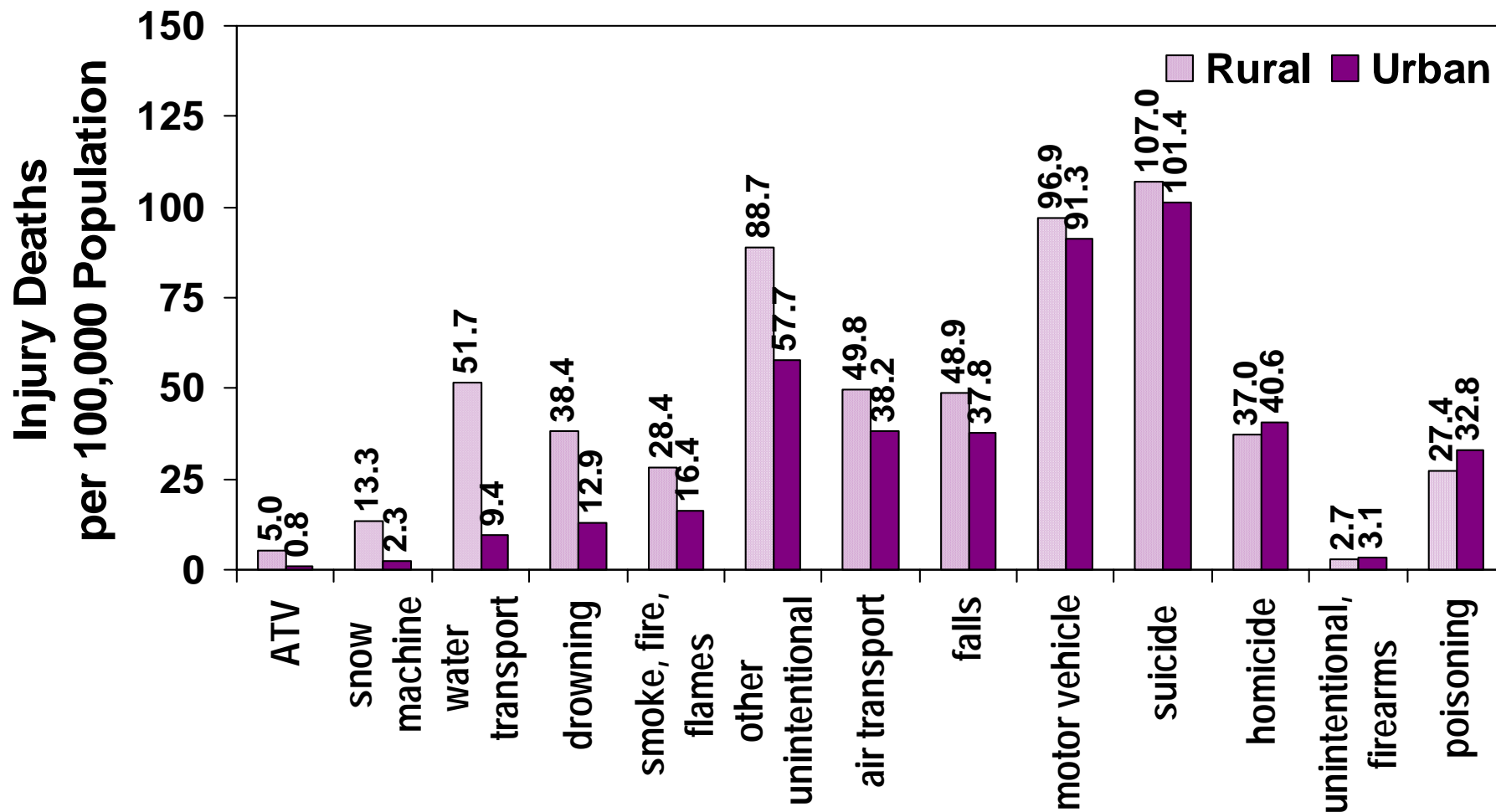
Rate Ratios and Native-White Rate Differences:

Adults 45+, 1981-2000

Cause	Native		White		Rate Ratio (N:W)	Rate Difference (N-W)
	Count	Rate	Count	Rate		
Other Unintentional	141	167.1	188	53.0	3.2	114.2
Motor Vehicle	90	106.7	333	93.8	1.1	12.9
Suicide	72	85.4	413	116.3	0.7	-31.0
Homicide	59	69.9	117	33.0	2.1	37.0
Drowning	53	62.8	59	16.6	3.8	46.2
Falls	49	58.1	153	43.1	1.3	15.0
Poisoning	46	54.5	94	26.5	2.1	28.1
Water Transport	46	54.5	88	24.8	2.2	29.7
Smoke, Fire, Flames	36	42.7	61	17.2	2.5	25.5
Snow Machine	25	29.6	9	2.5	11.7	27.1
Air Transport	17	20.2	187	52.7	0.4	-32.5
ATV	9	10.7	4	1.1	9.4	9.5
Firearms, Unintentional	2	2.4	12	3.4	0.7	-1.0

Injury Death Rates by Region and Cause: ***Adults 45+, 1981-2000***

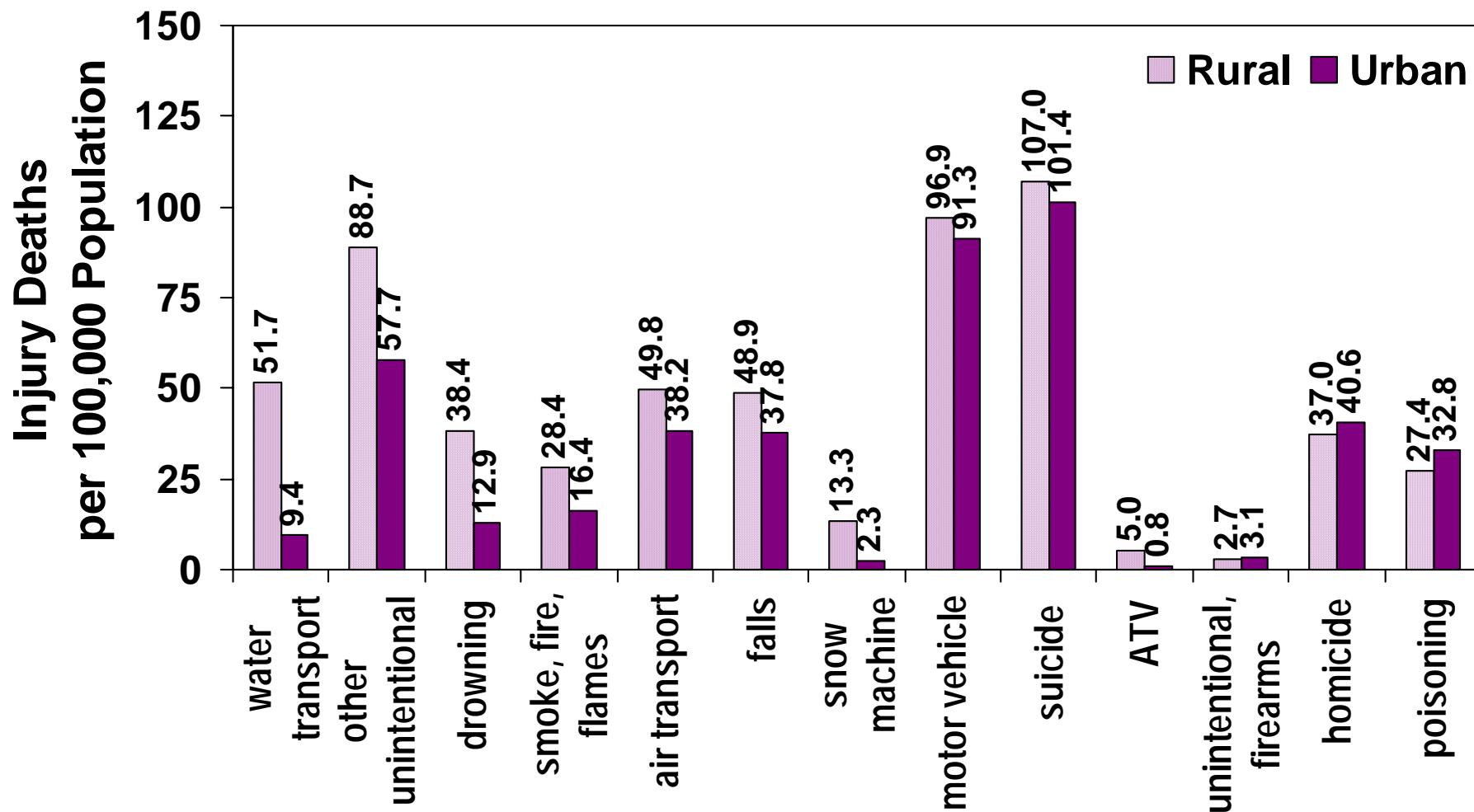
(Ordered from highest (left) to lowest Rural-to-Urban Rate Ratio)



Injury Death Rates by Region and Cause:

Adults 45+, 1981-2000

(Ordered from highest (left) to lowest Rural-to-Urban Rate Difference)



Source: DHSS/ABVS

Injury Death Rates by Region and Cause, Rural:Urban

Rate Ratios and Rural-Urban Rate Differences:

Adults 45+, 1981-2000

Cause	Rural		Urban		Rate Ratio (R:U)	Rate Difference (R-U)
	Count	Rate	Count	Rate		
Suicide	234	107.0	260	101.4	1.1	5.6
Motor Vehicle	212	96.9	234	91.3	1.1	5.7
Other Unintentional	194	88.7	148	57.7	1.5	31.0
Water Transport	113	51.7	24	9.4	5.5	42.3
Air Transport	109	49.8	98	38.2	1.3	11.6
Falls	107	48.9	97	37.8	1.3	11.1
Drowning	84	38.4	33	12.9	3.0	25.5
Homicide	81	37.0	104	40.6	0.9	-3.5
Smoke, Fire, Flames	62	28.4	42	16.4	1.7	12.0
Poisoning	60	27.4	84	32.8	0.8	-5.3
Snow Machine	29	13.3	6	2.3	5.7	10.9
ATV	11	5.0	2	0.8	6.4	4.3
Firearms, Unintentional	6	2.7	8	3.1	0.9	-0.4

Causes of Death with Largest Racial Disparities among Injury Death Rates, **Adults 45+**

- ✓ Largest Native:White Rate Ratios:
 - ✓ Snow machine
 - ✓ ATV

- ✓ Largest Native:White Rate Differences:
 - ✓ Drowning
 - ✓ Homicide
 - ✓ Water transport
 - ✓ Poisoning
 - ✓ Snow machine

Source: DHSS/ABVS

Causes of Death with Largest Regional Disparities among Injury Death Rates, **Adults 45+**

- ✓ Largest Rural:Urban Rate Ratios:
 - ✓ ATV
 - ✓ Snow machine
 - ✓ Water transport

- ✓ Largest Rural:Urban Rate Differences:
 - ✓ Water transport
 - ✓ Drowning
 - ✓ Smoke/fire/flames
 - ✓ Air Transport

Summary: Disparities in Specific Causes of Injury Death

- ✓ Racial disparities are generally larger than regional disparities (based on RRs)
- ✓ Large racial disparities seen across all groups for:
 - ✓ Snow machine
 - ✓ Homicide
 - ✓ drowning
- ✓ Large regional disparities seen across all groups for:
 - ✓ Snow machine
 - ✓ ATV
 - ✓ Water transport
- ✓ Large racial *and* regional disparities for suicide in all groups other than adults 45+

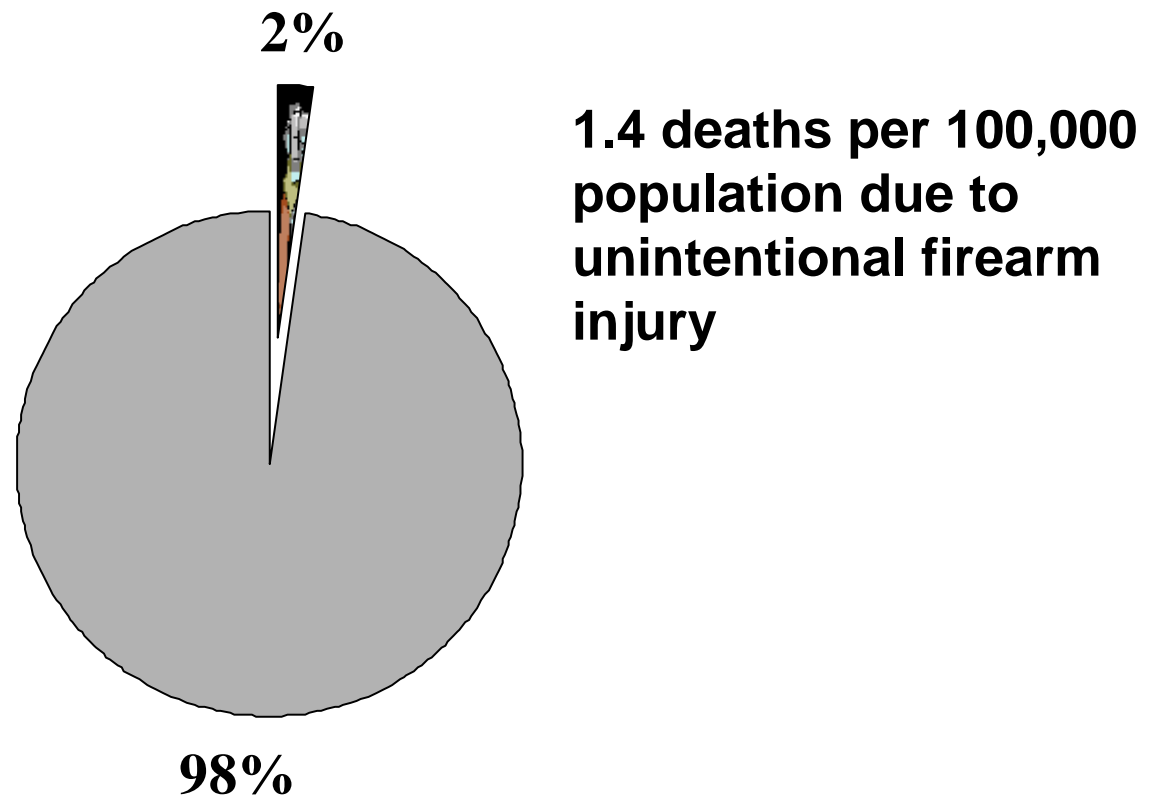
Firearm Involvement in Unintentional Injury Death, Suicide, and Homicide

Alaska 1981-2000

Rates of Injury Deaths Due to Firearms
and
Racial and Regional Disparities in Intentional
Injuries, by Firearm Use

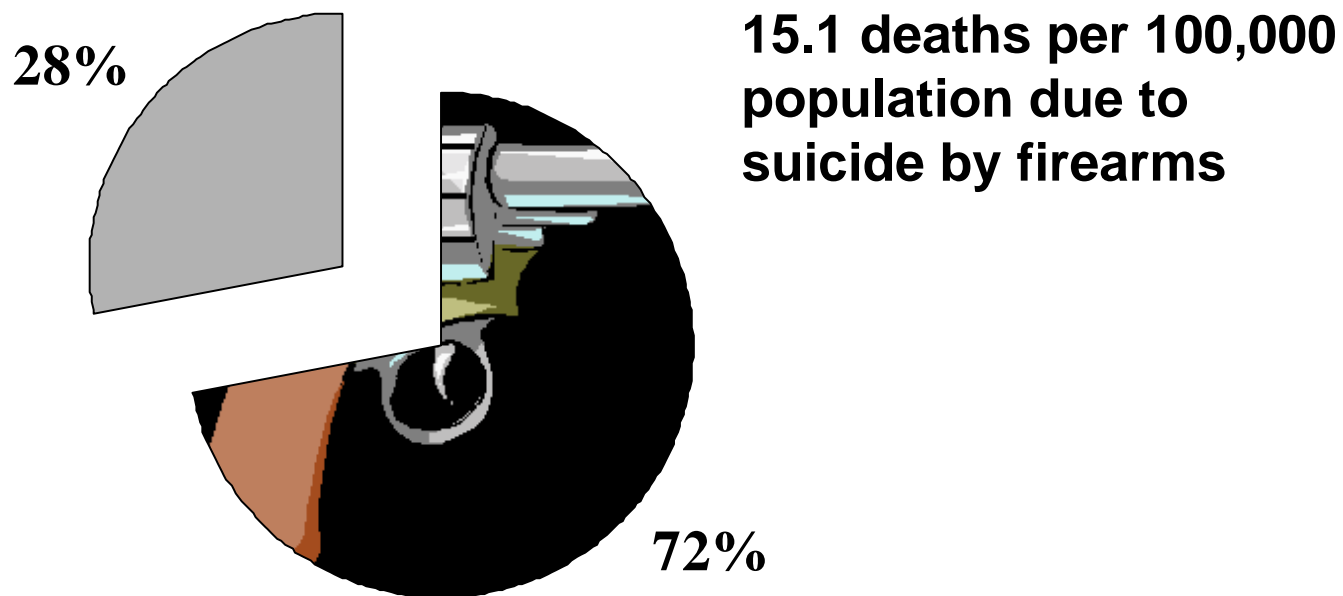
Unintentional Injury Deaths (Firearms vs. Other) Alaska Residents (N = 6,777), 1981-2000

■ Unintentional, Firearms ■ Unintentional, Other



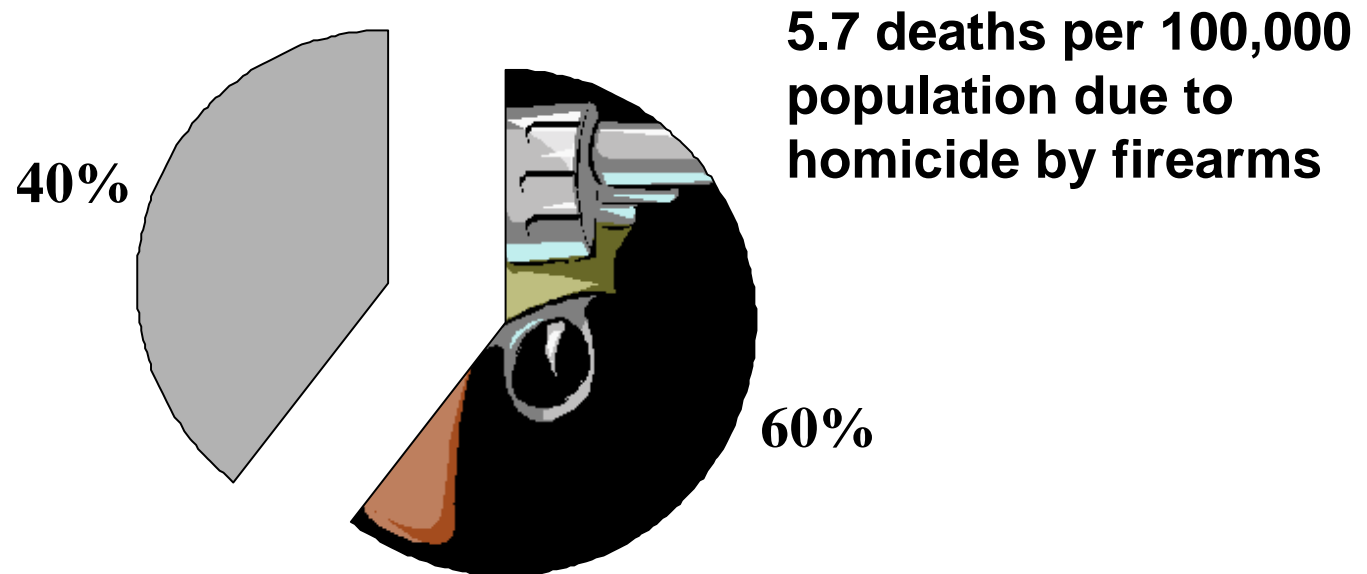
Suicide Injury Deaths (Firearms vs. Other) Alaska Residents (N = 2,337), 1981-2000

■ Suicide, Firearms ■ Suicide, Other

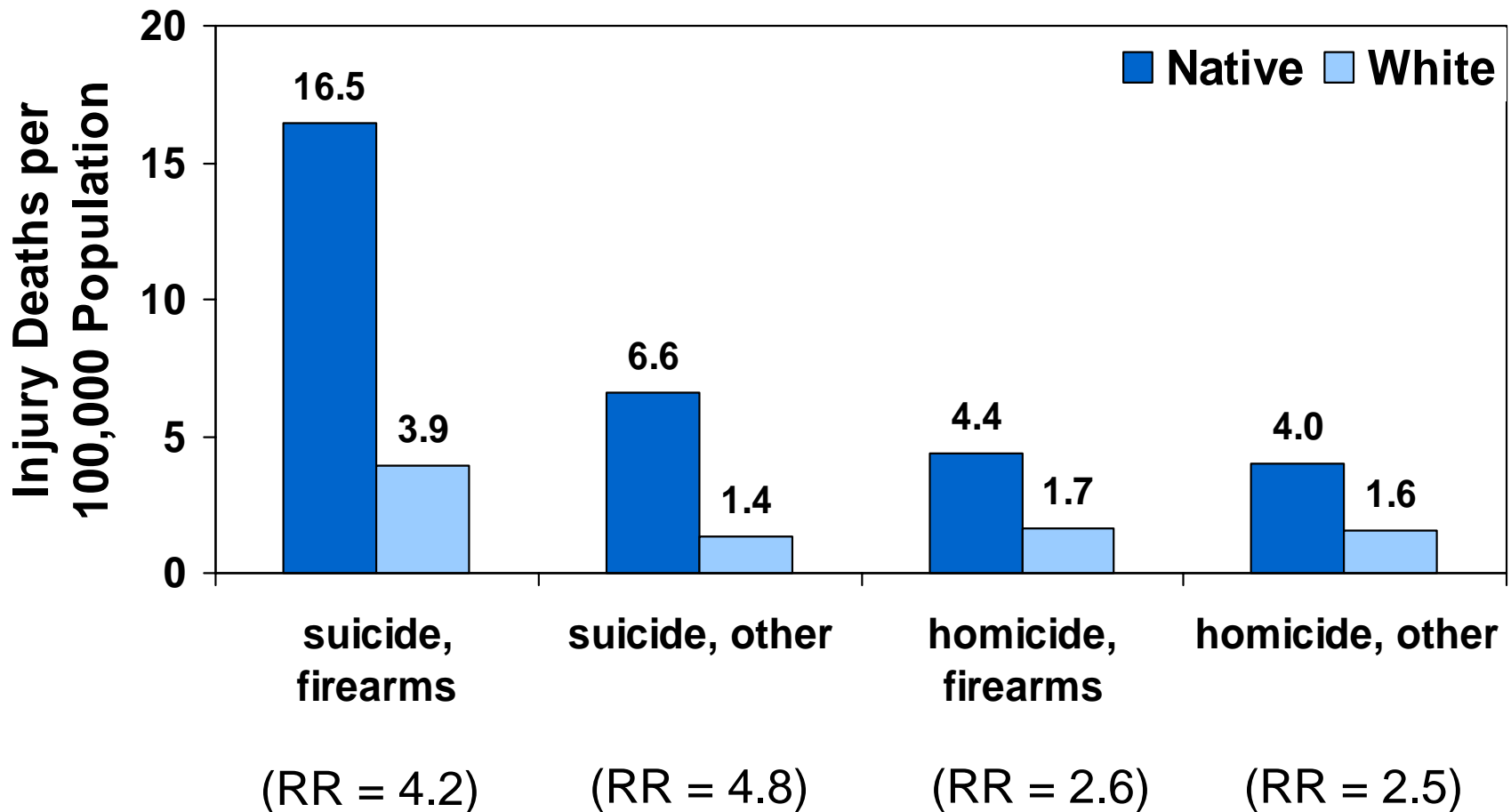


Homicide Injury Deaths (Firearms vs. Other) Alaska Residents (N = 1,058), 1981-2000

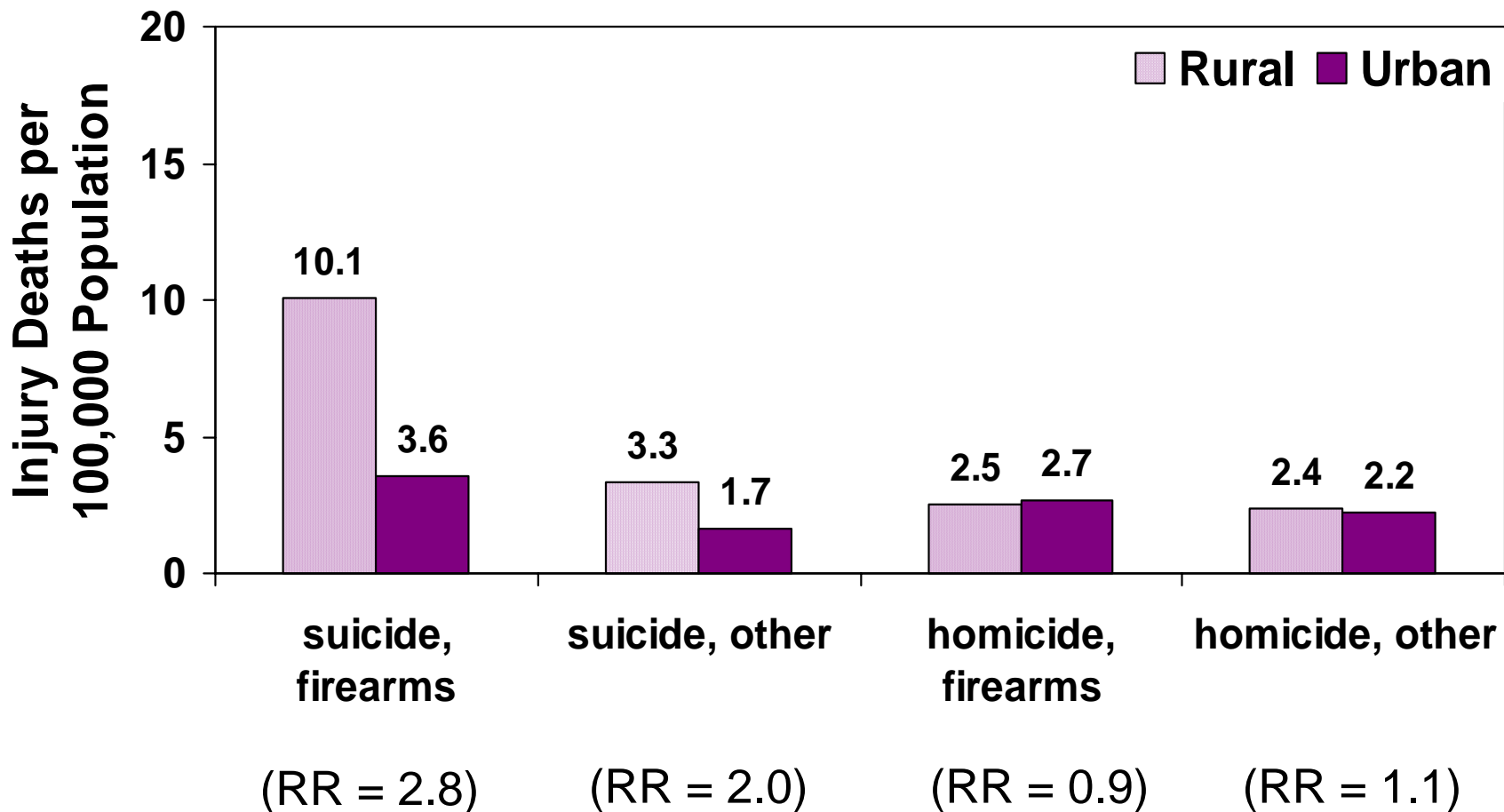
■ Homicide, Firearms ■ Homicide, Other



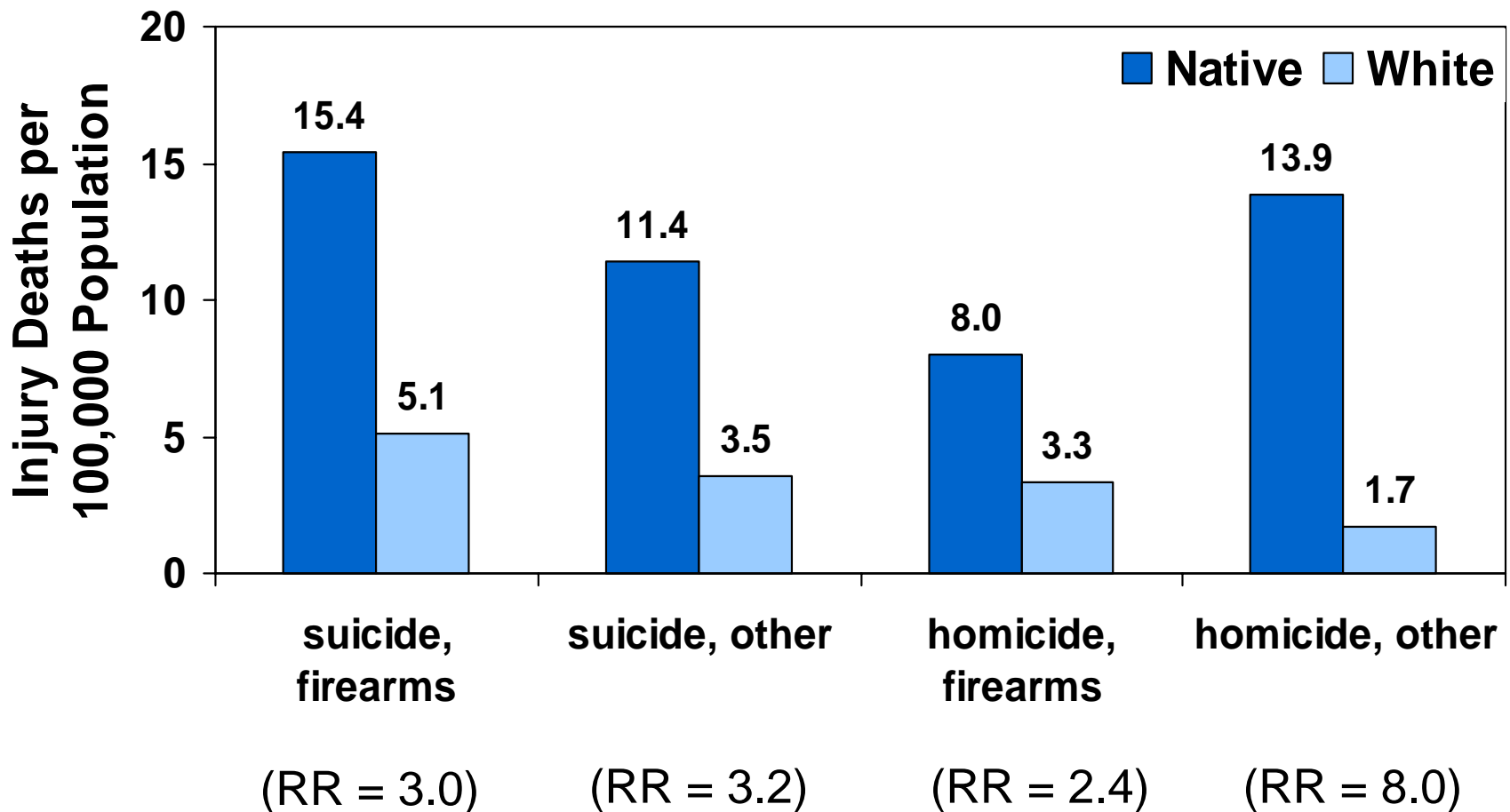
Suicide and Homicide Injury Death Rates by Race and Involvement of Firearms: *Youth 0-19, 1981-2000*



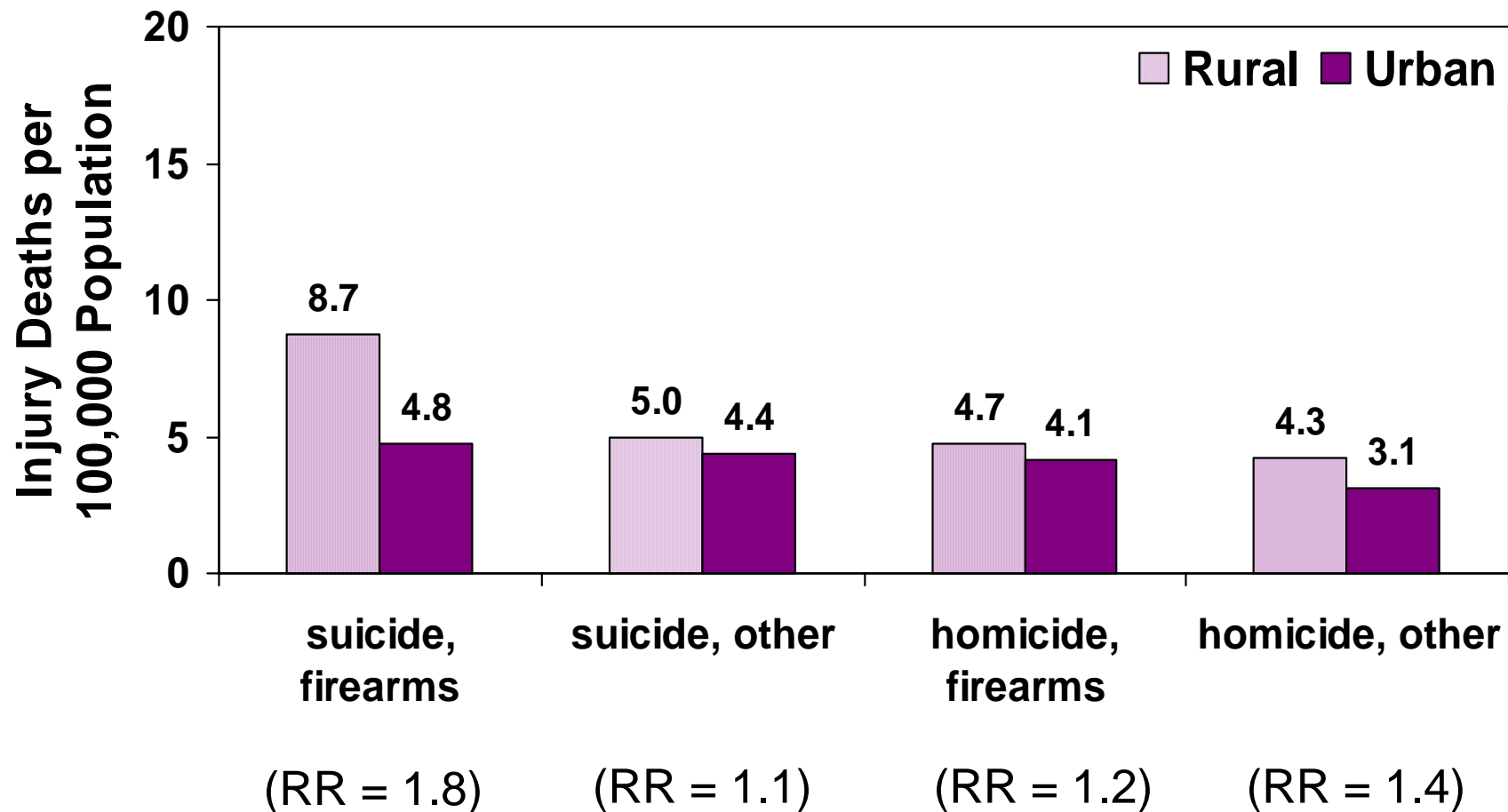
Suicide and Homicide Injury Death Rates by Region and Involvement of Firearms: *Youth 0-19, 1981-2000*



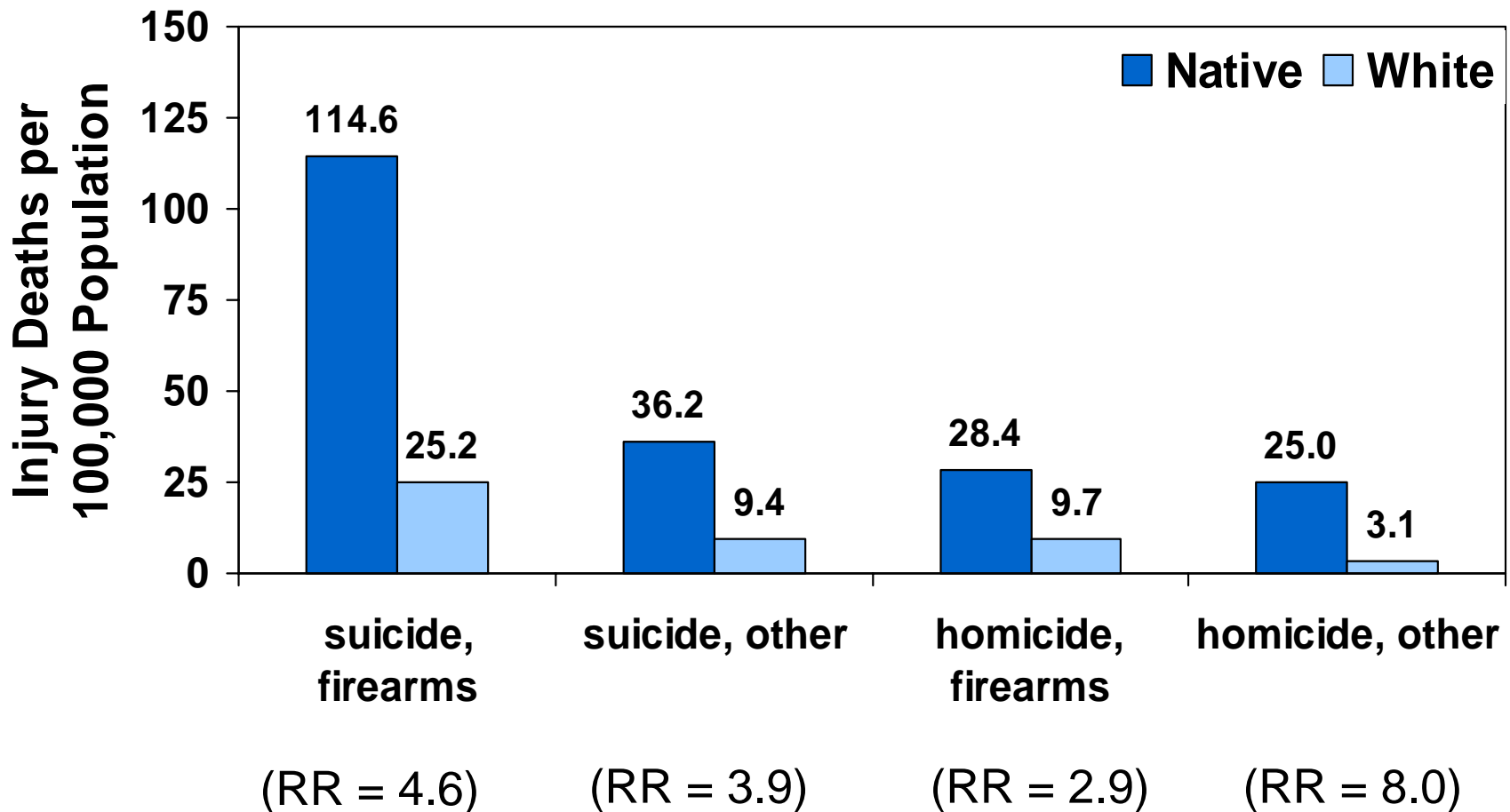
Suicide and Homicide Injury Death Rates by Race and Involvement of Firearms: *Women 20-44, 1981-2000*



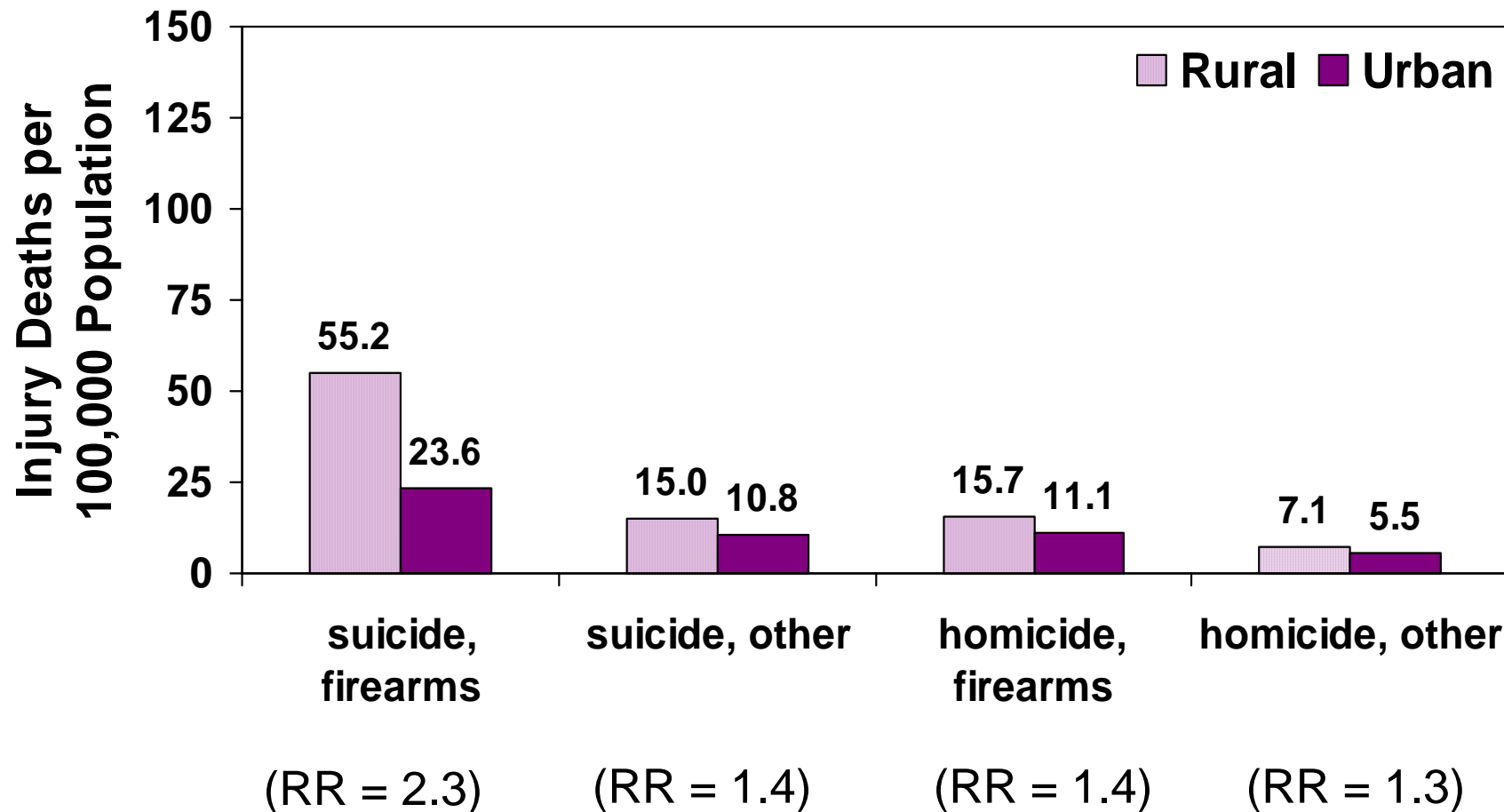
Suicide and Homicide Injury Death Rates by Region and Involvement of Firearms: ***Women 20-44, 1981-2000***



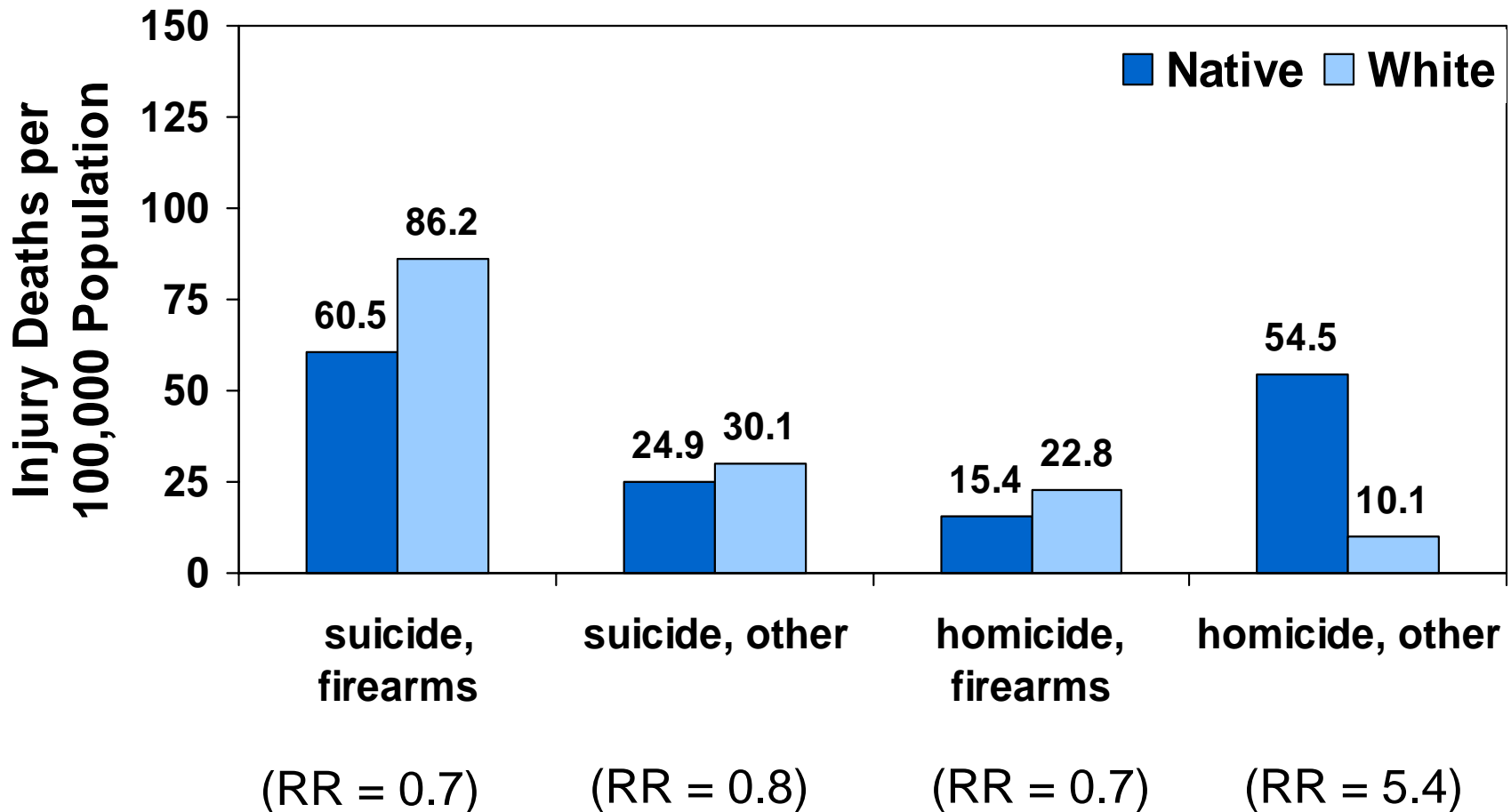
Suicide and Homicide Injury Death Rates by Race and Involvement of Firearms: *Men 20-44, 1981-2000*



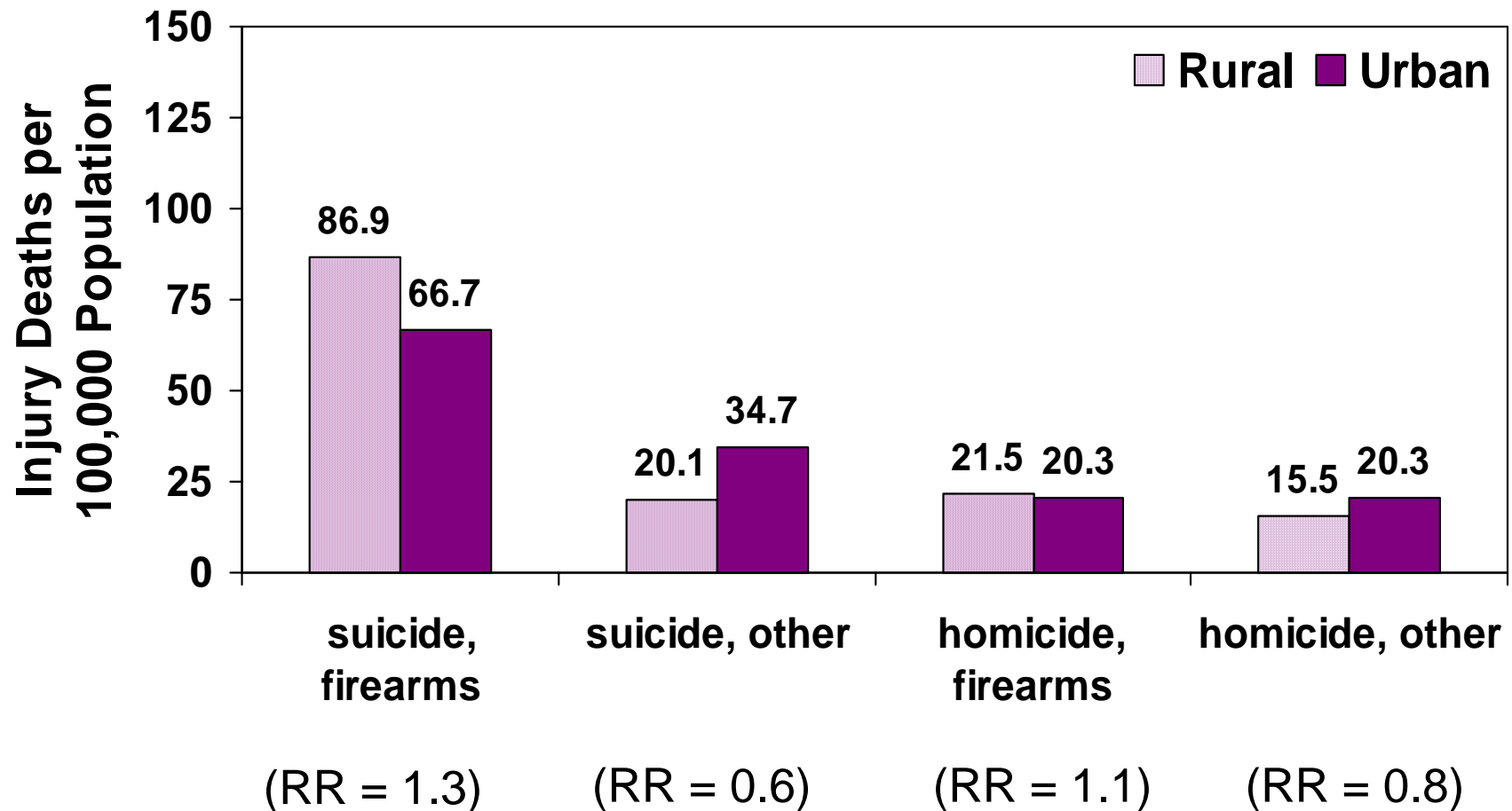
Suicide and Homicide Injury Death Rates by Region and Involvement of Firearms: *Men 20-44, 1981-2000*



Suicide and Homicide Injury Death Rates by Race and Involvement of Firearms: *Adults 45+, 1981-2000*



Suicide and Homicide Injury Death Rates by Region and Involvement of Firearms: *Adults 45+, 1981-2000*



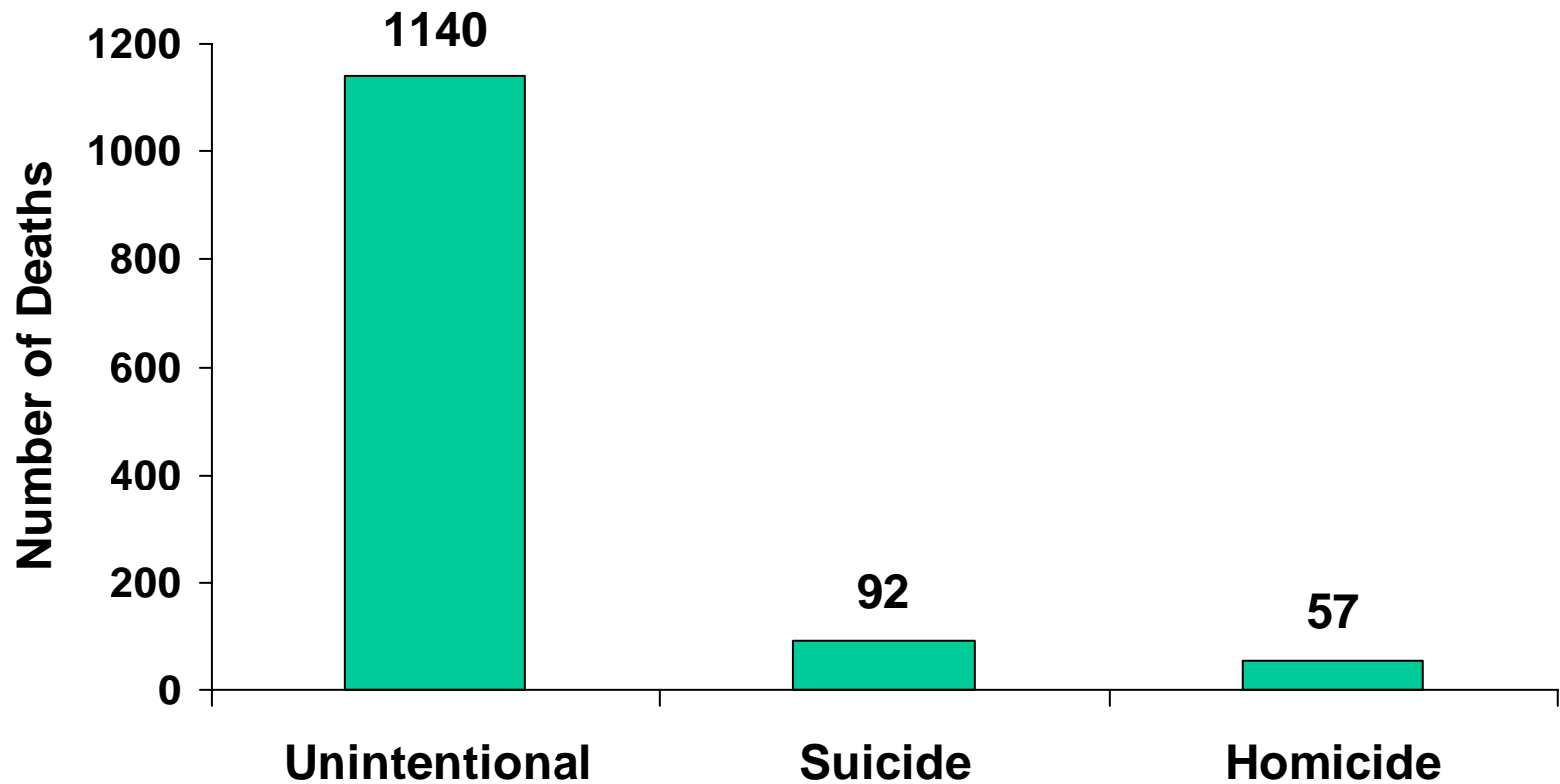
Summary: Firearms as a Cause of Injury Death

- ✓ Firearms are associated with the majority of Alaskan homicides (60%) and suicides (72%); only a fraction of all unintentional injury deaths were linked with firearms use (2%).
- ✓ Among youth 0-19, the involvement of firearms made little difference in the size of either racial or regional disparities in intentional injury deaths.
- ✓ Among men and women 20-44 as well as adults over age 45, there are much larger racial disparities in rates of homicide by “other means” than in rates of homicide by firearms.
- ✓ In all groups, there was a slightly larger rural-to-urban disparity among rates of suicide by firearms compared to rates of suicide by other means.

Injury Deaths to Non-Residents

Alaska 1981-2000

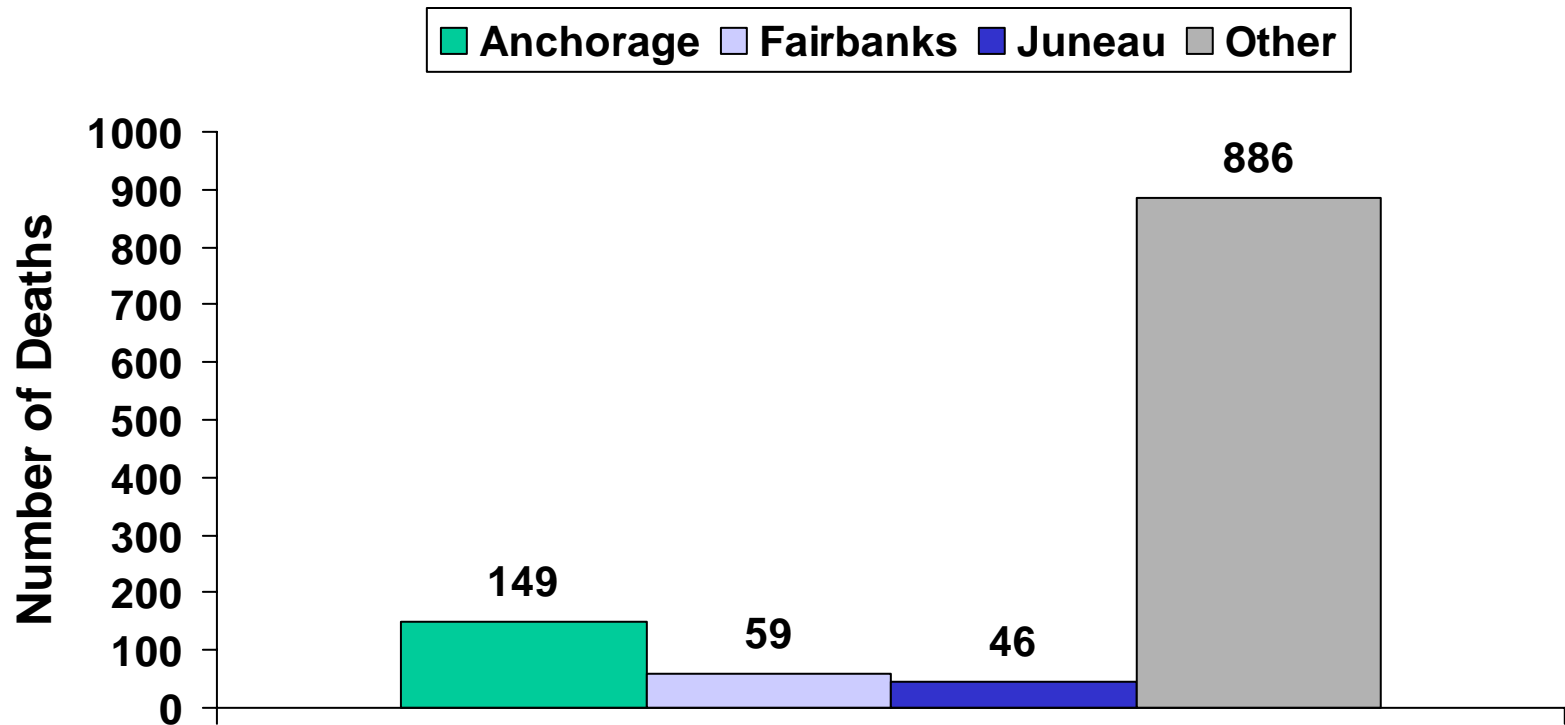
Non-Resident Injury Deaths by Cause (N = 1,289) Alaska 1981-2000



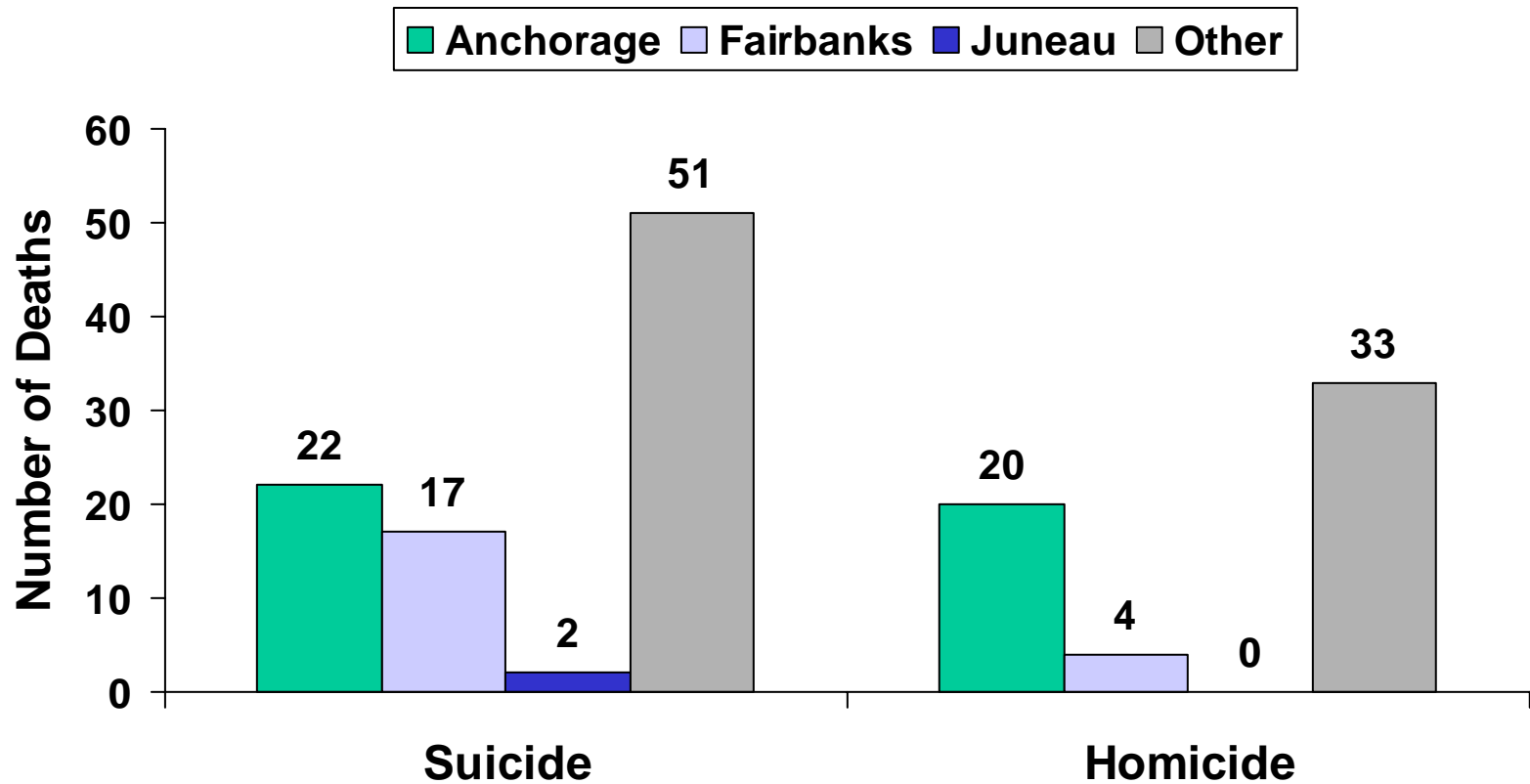
Non-Resident Injury Deaths by Cause (N = 1,289) Alaska 1981-2000



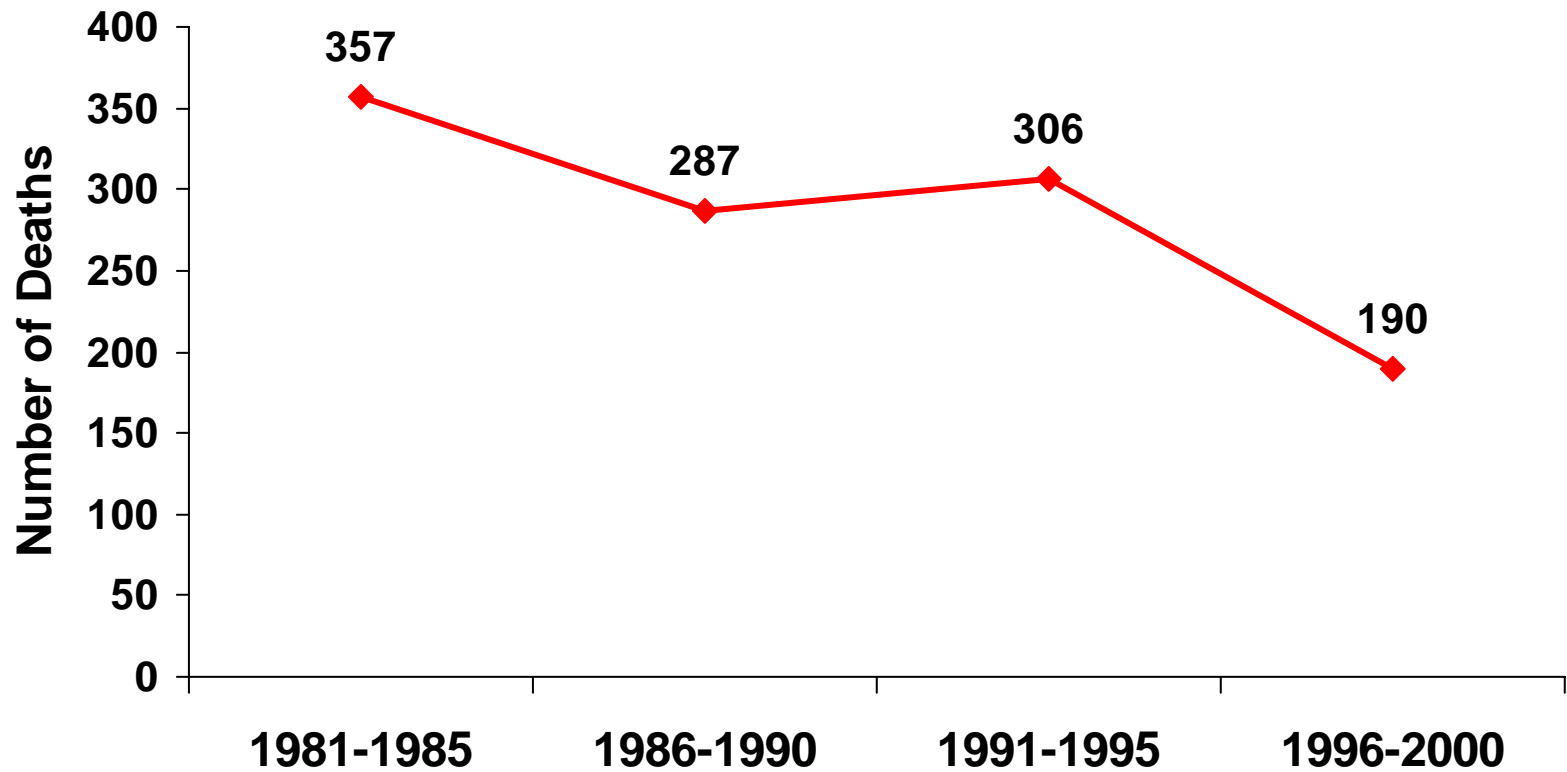
Non-Resident Unintentional Injury Deaths by Region of Occurrence Alaska 1981-2000



Non-Resident Intentional Injury Deaths by Region of Occurrence Alaska 1981-2000

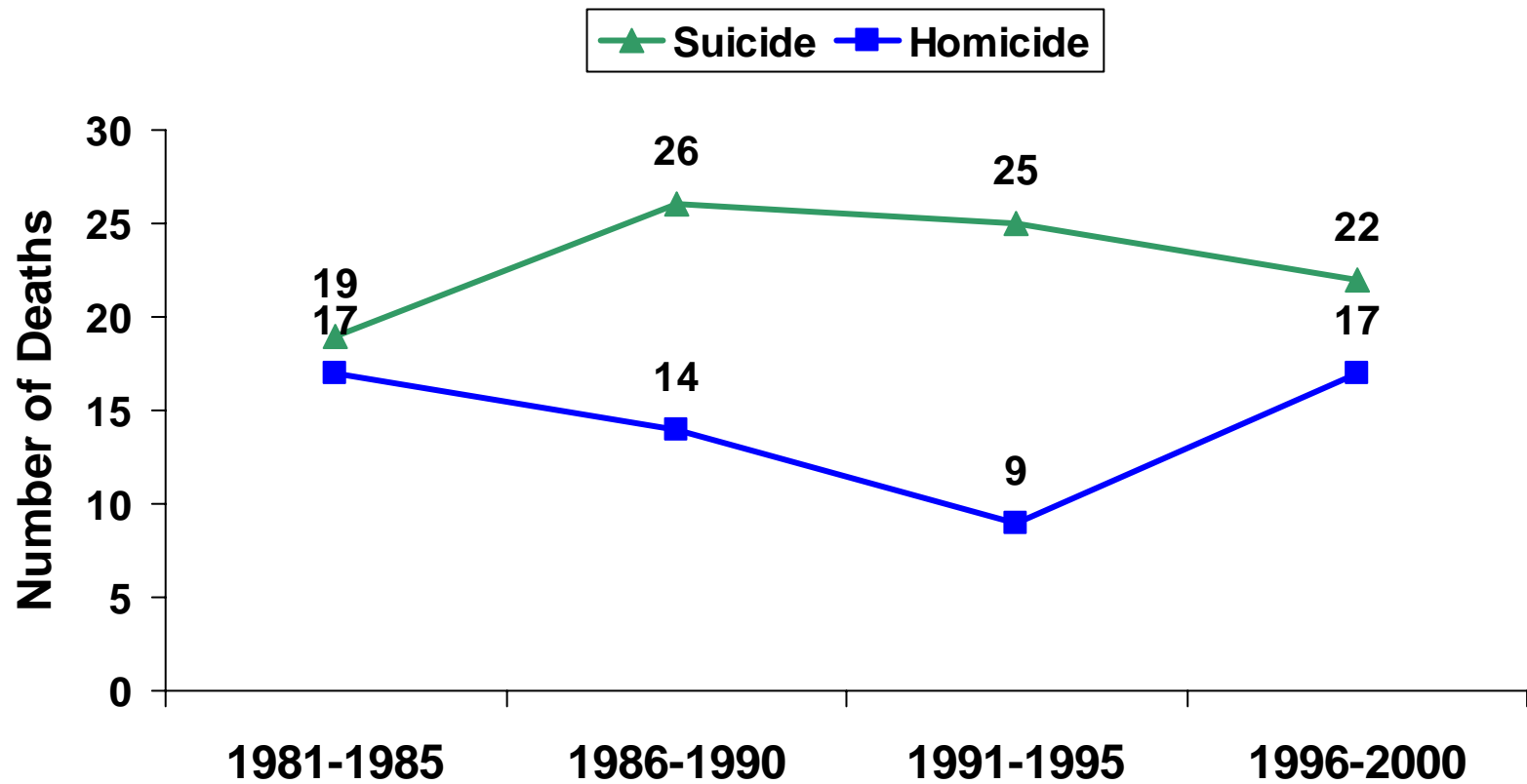


Non-Resident Unintentional Injury Deaths by Period Alaska 1981-2000



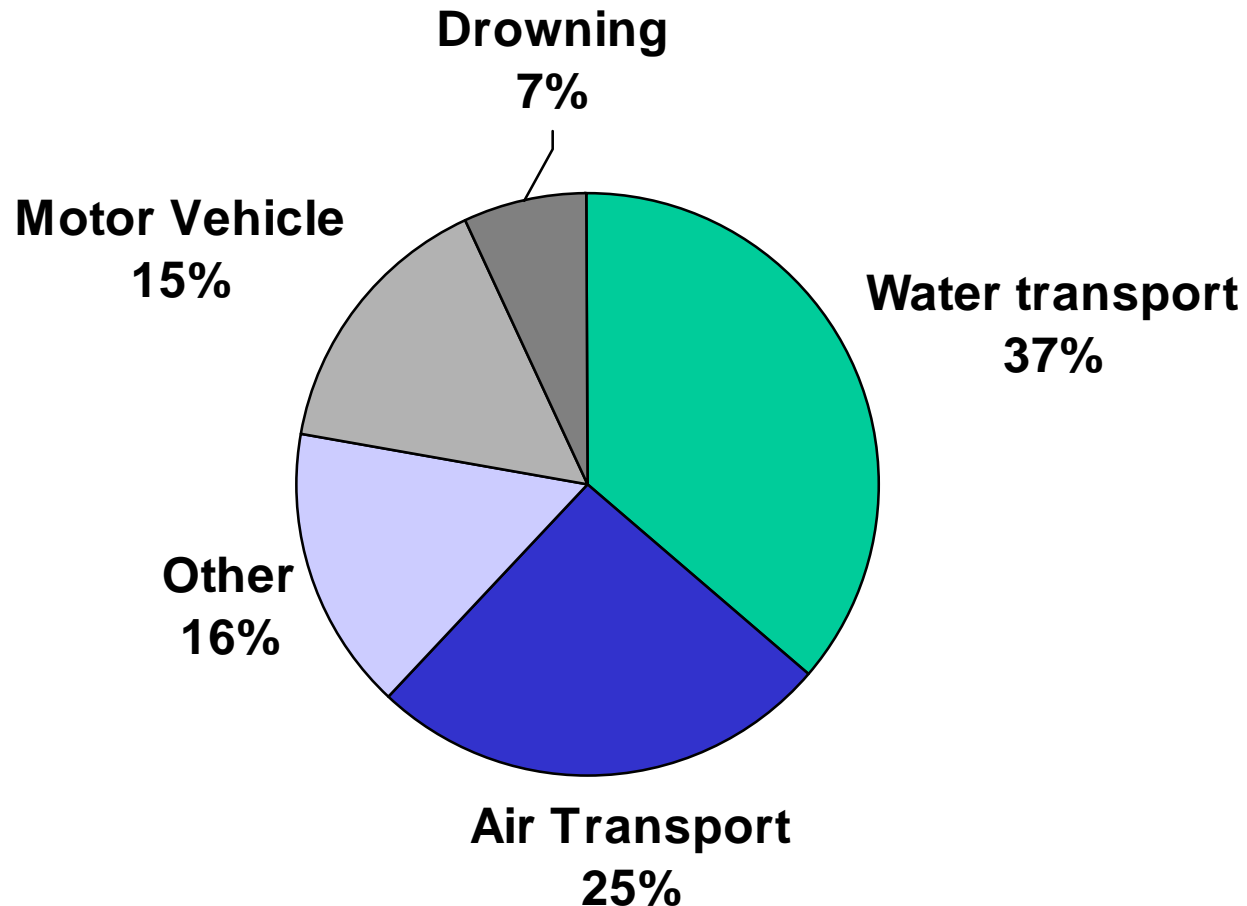
Source: DHSS/ABVS

Non-Resident Intentional Injury Deaths by Period Alaska 1981-2000



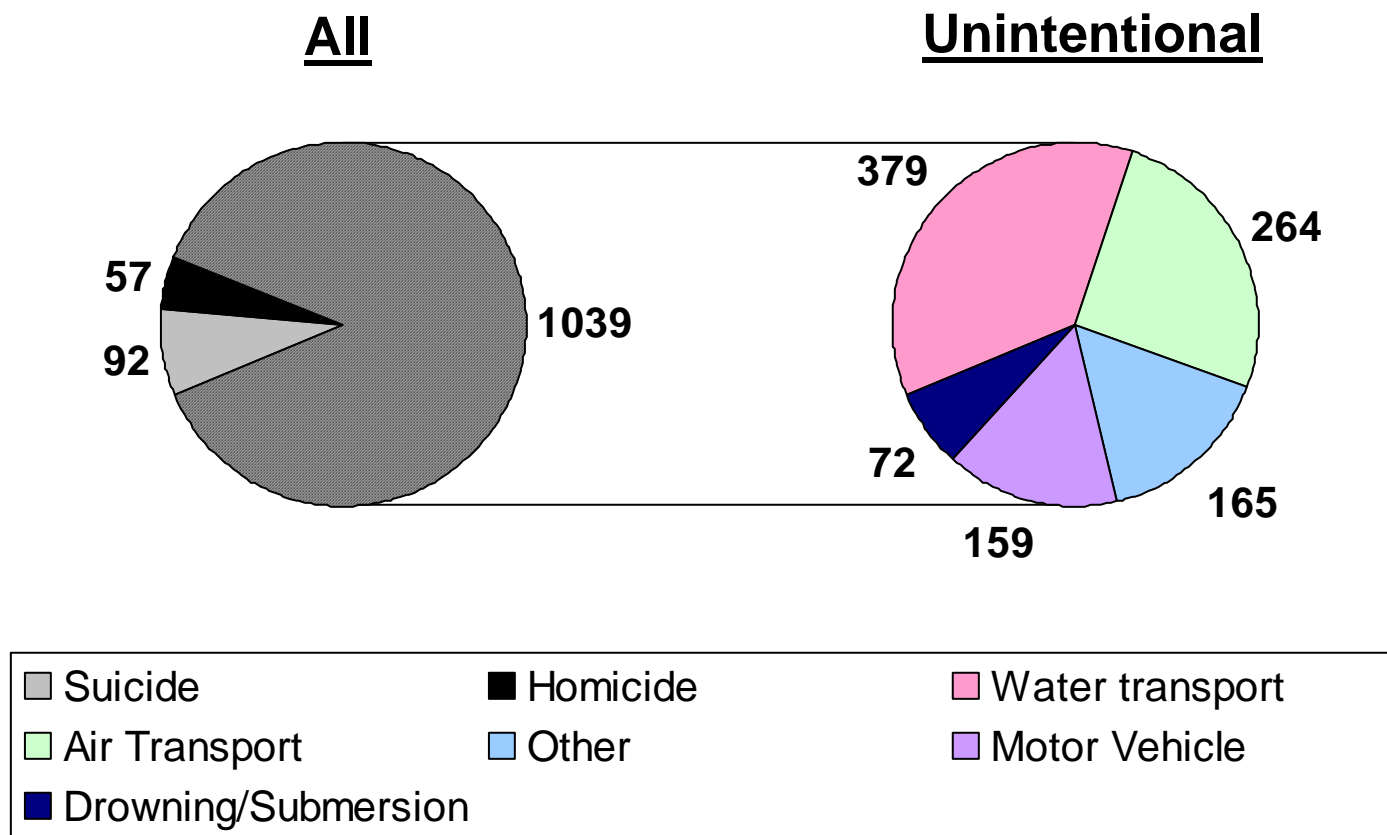
Source: DHSS/ABVS

Non-Resident Unintentional Injury Deaths by Cause Alaska 1981-2000



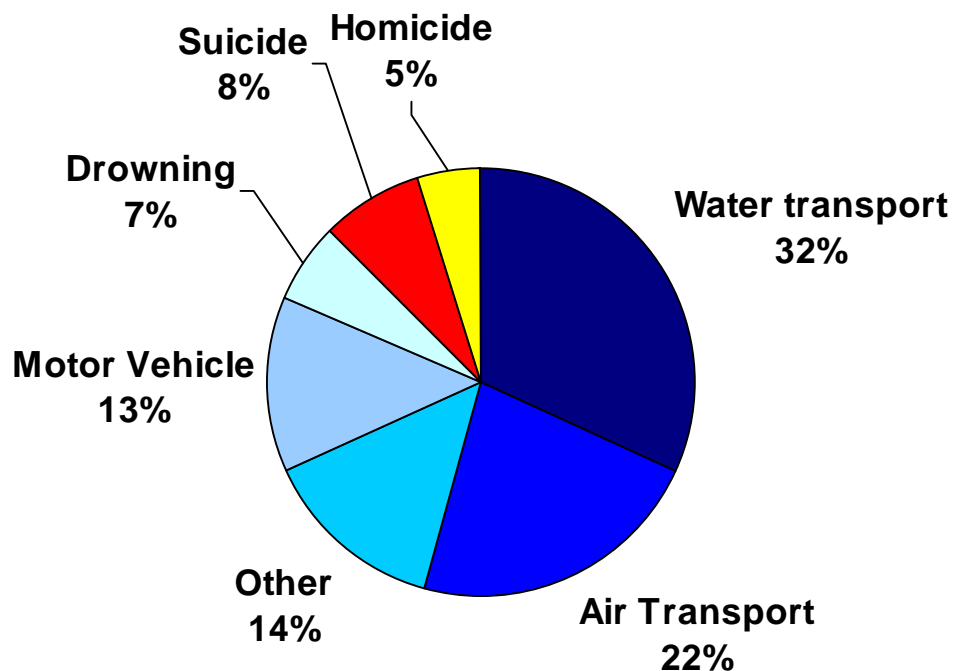
Source: DHSS/ABVS

Non-Resident Injury Deaths by Cause, Unintentional Injury Causes Broken Out Alaska 1981-2000

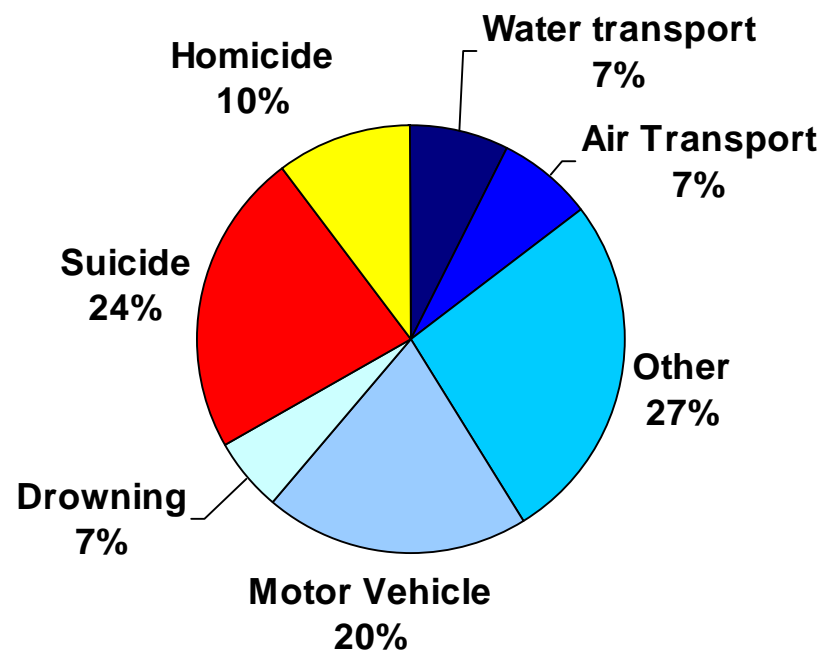


Injury Deaths by Residency and Cause Alaska 1981-2000

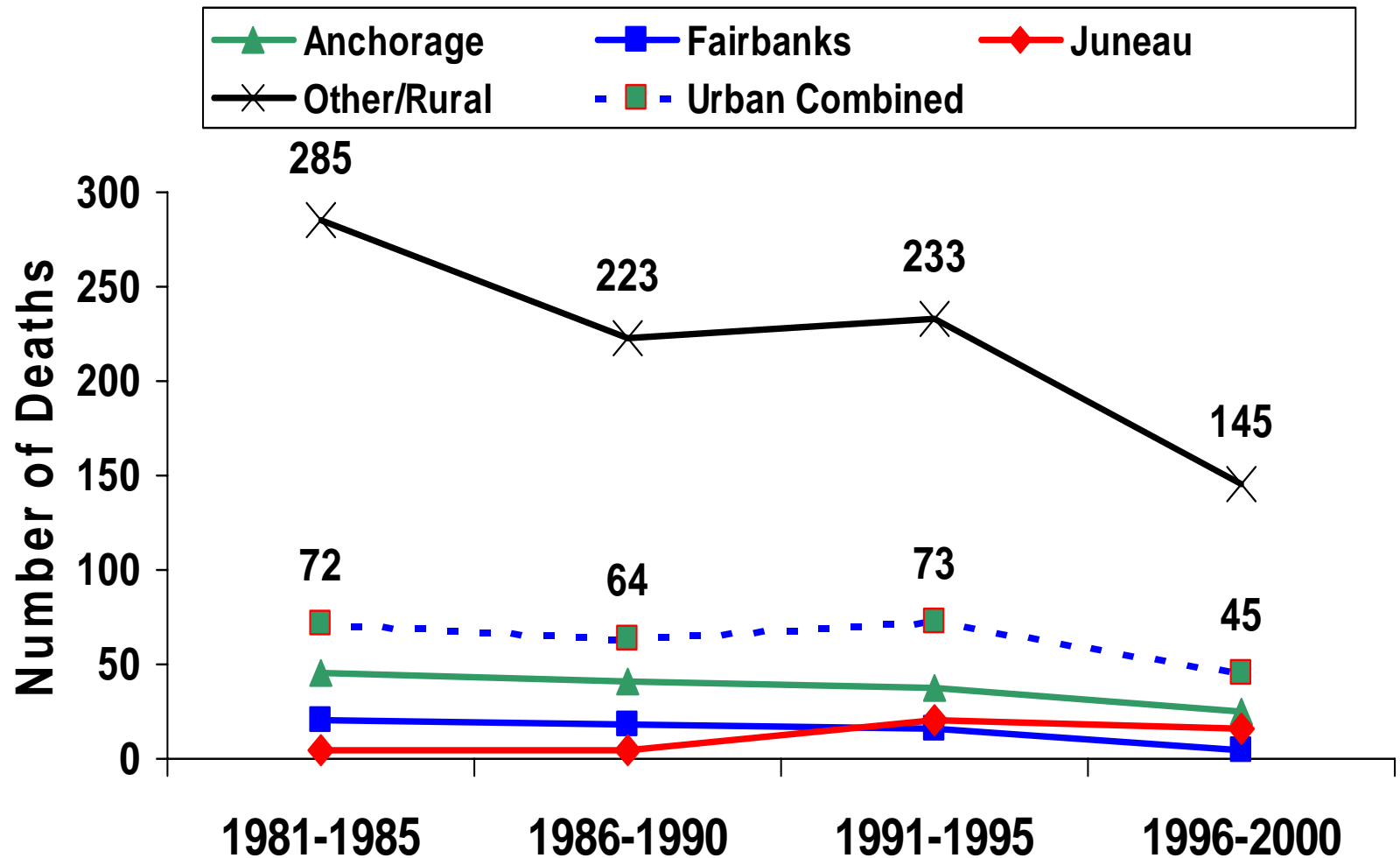
**Non-Residents
(N = 1,289)**



**AK Residents
(N = 10,368)**

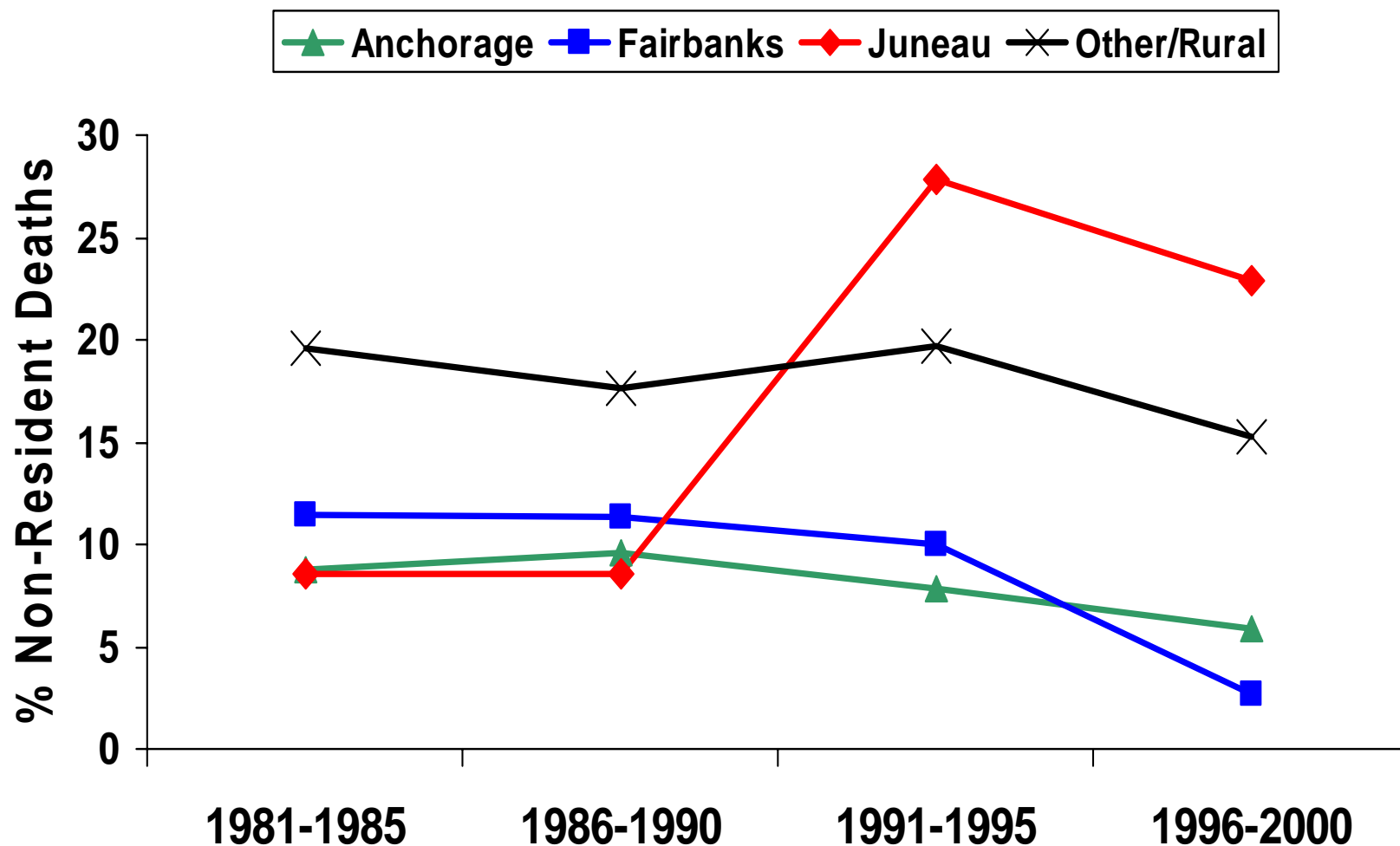


Non-Resident Unintentional Injury Deaths by Region of Occurrence and Period Alaska 1981-2000



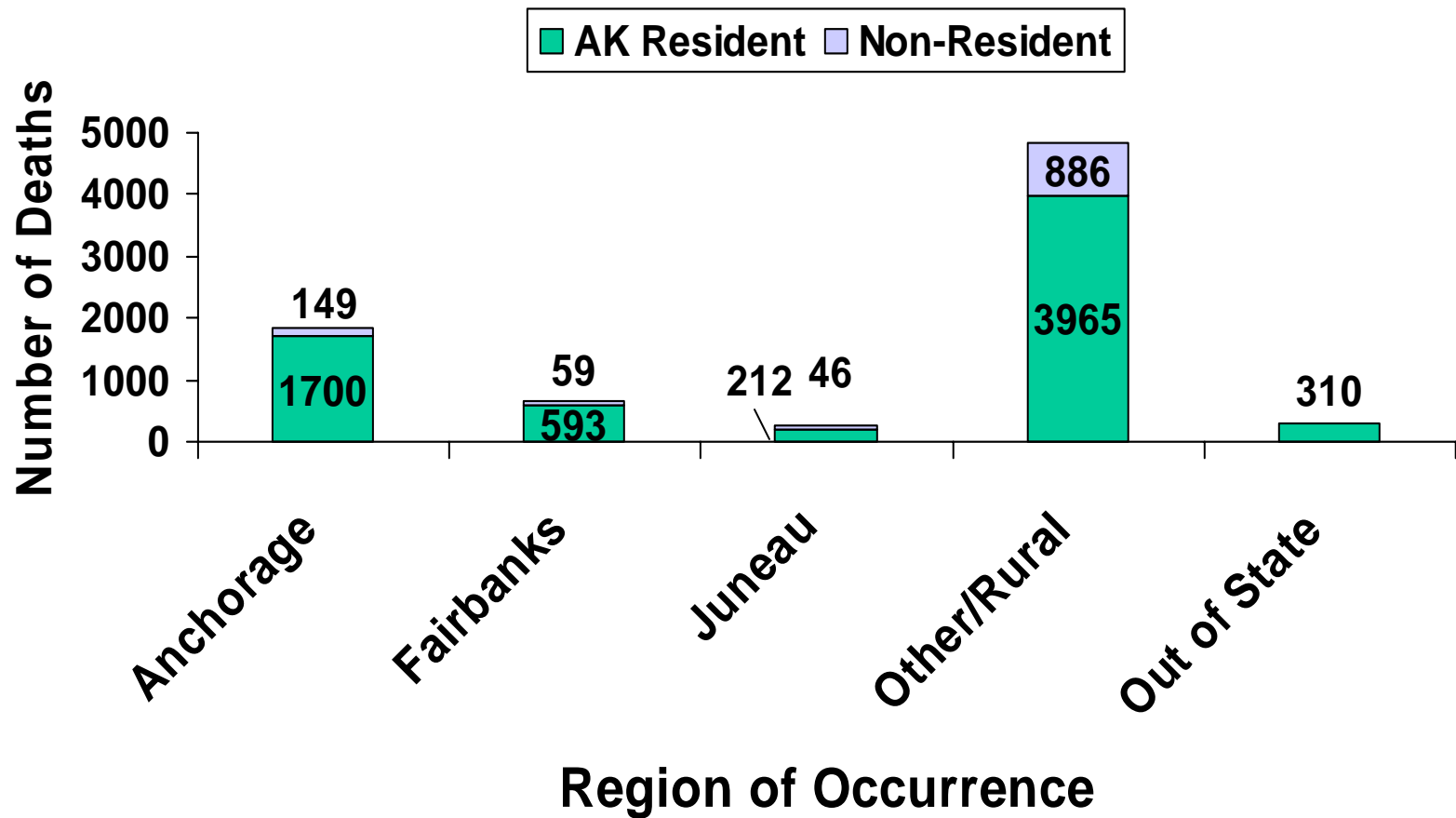
Source: DHSS/ABVS

Percent of Unintentional Injury Deaths to Non-Residents by Region of Occurrence and Period Alaska 1981-2000

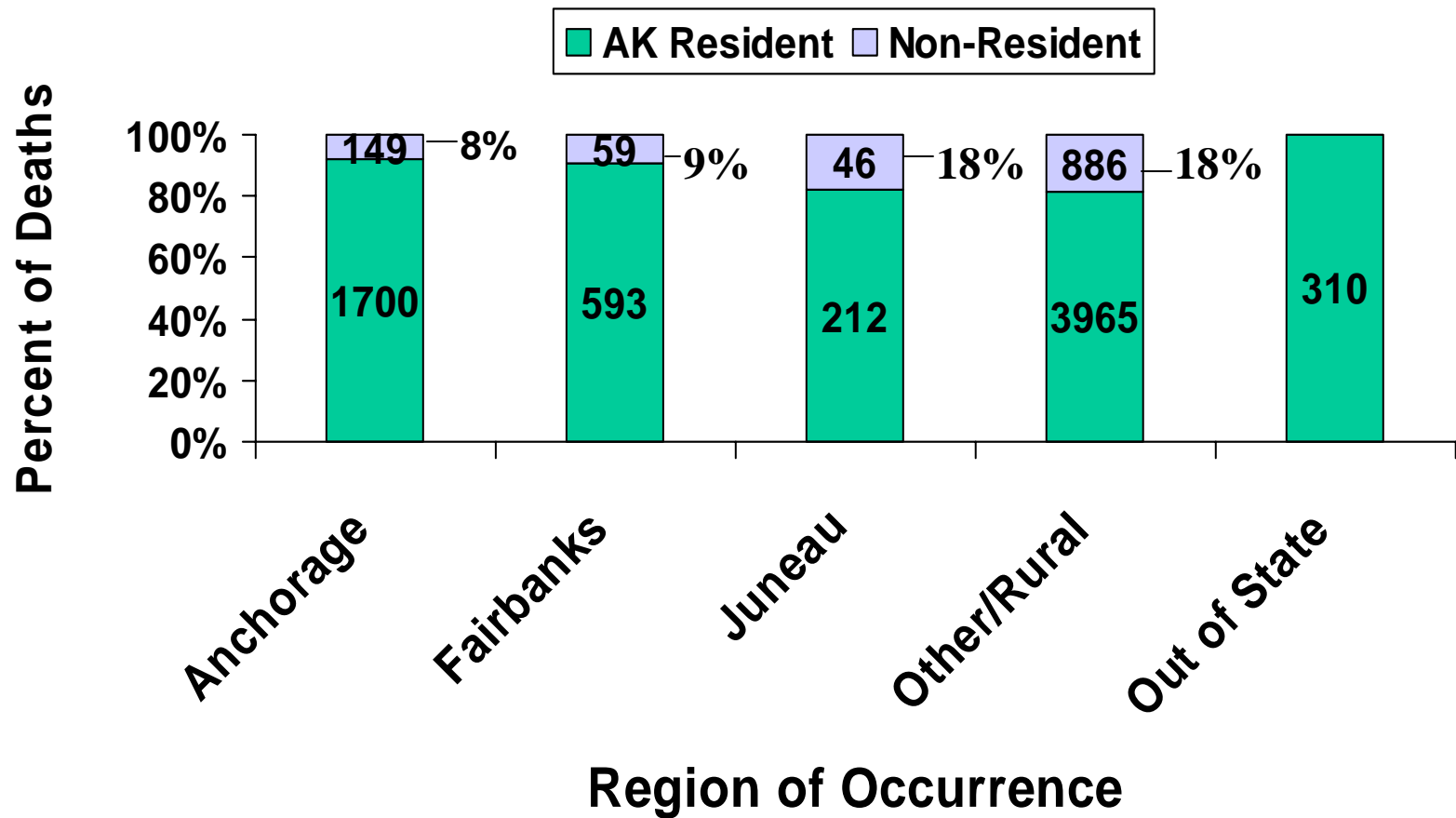


Source: DHSS/ABVS

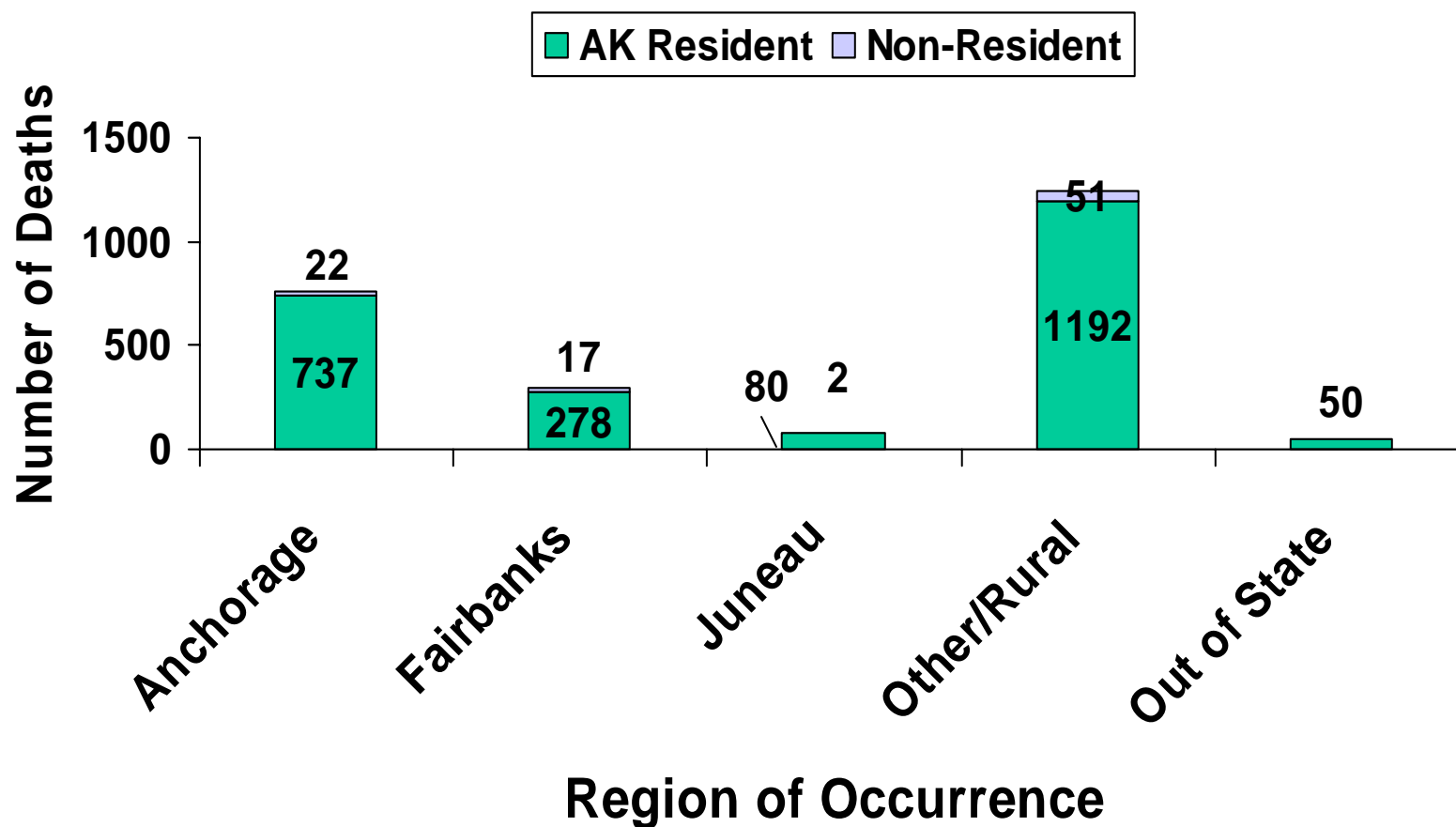
Unintentional Injury Deaths by Residency and Region of Occurrence Alaska 1981-2000



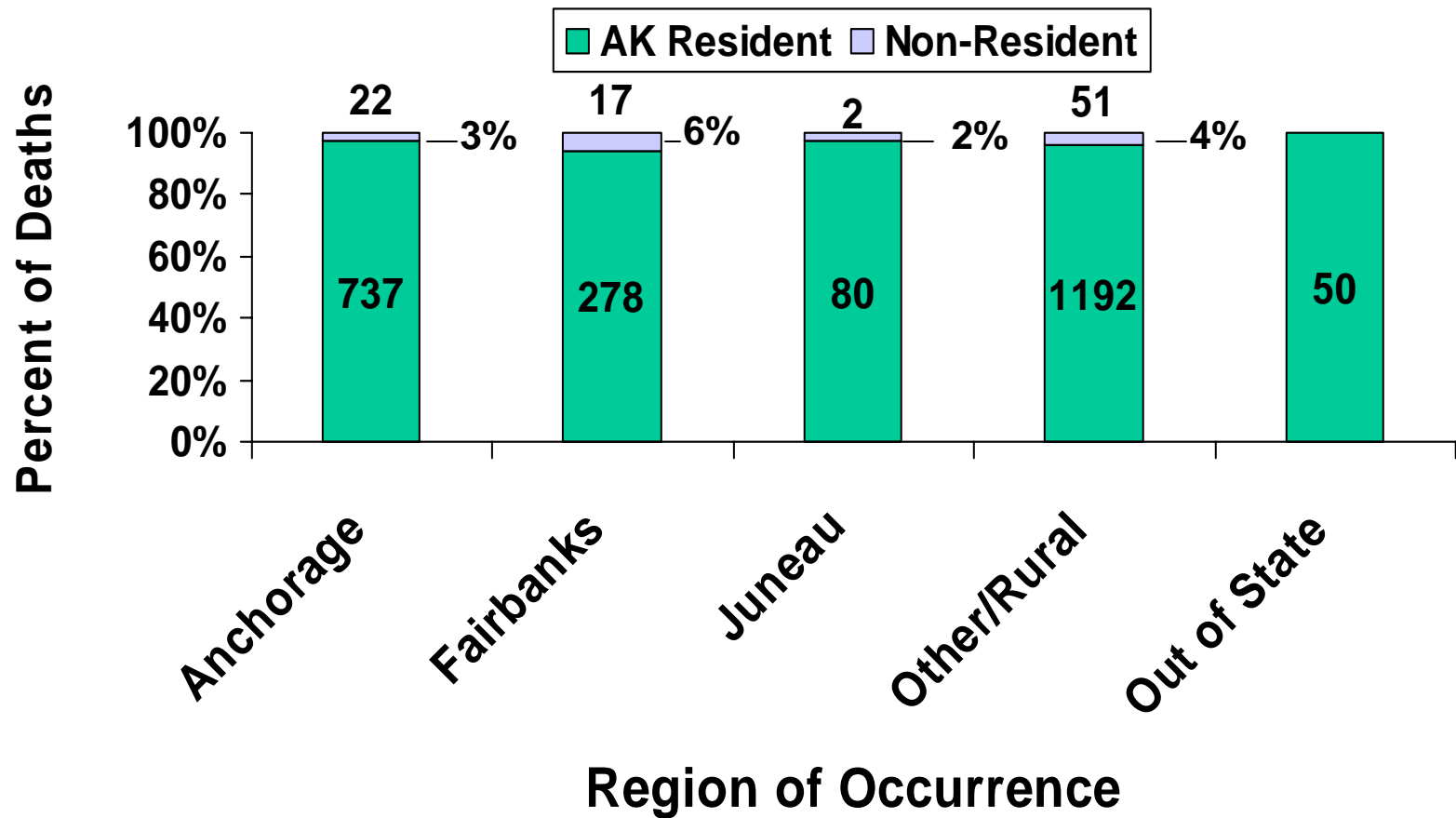
Percent of Unintentional Injury Deaths by Residency and Region of Occurrence Alaska 1981-2000



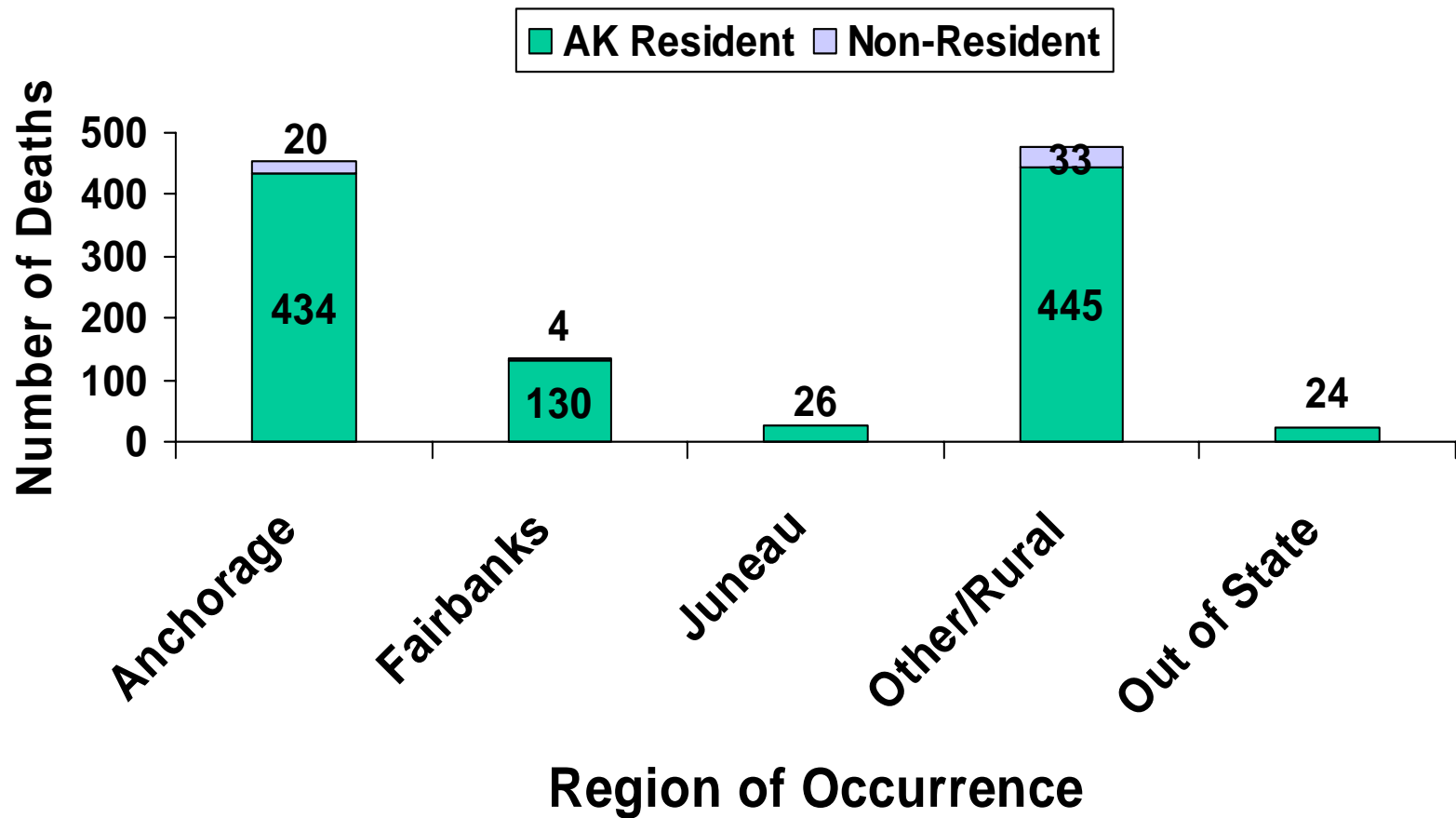
Suicides by Residency and Region of Occurrence Alaska 1981-2000



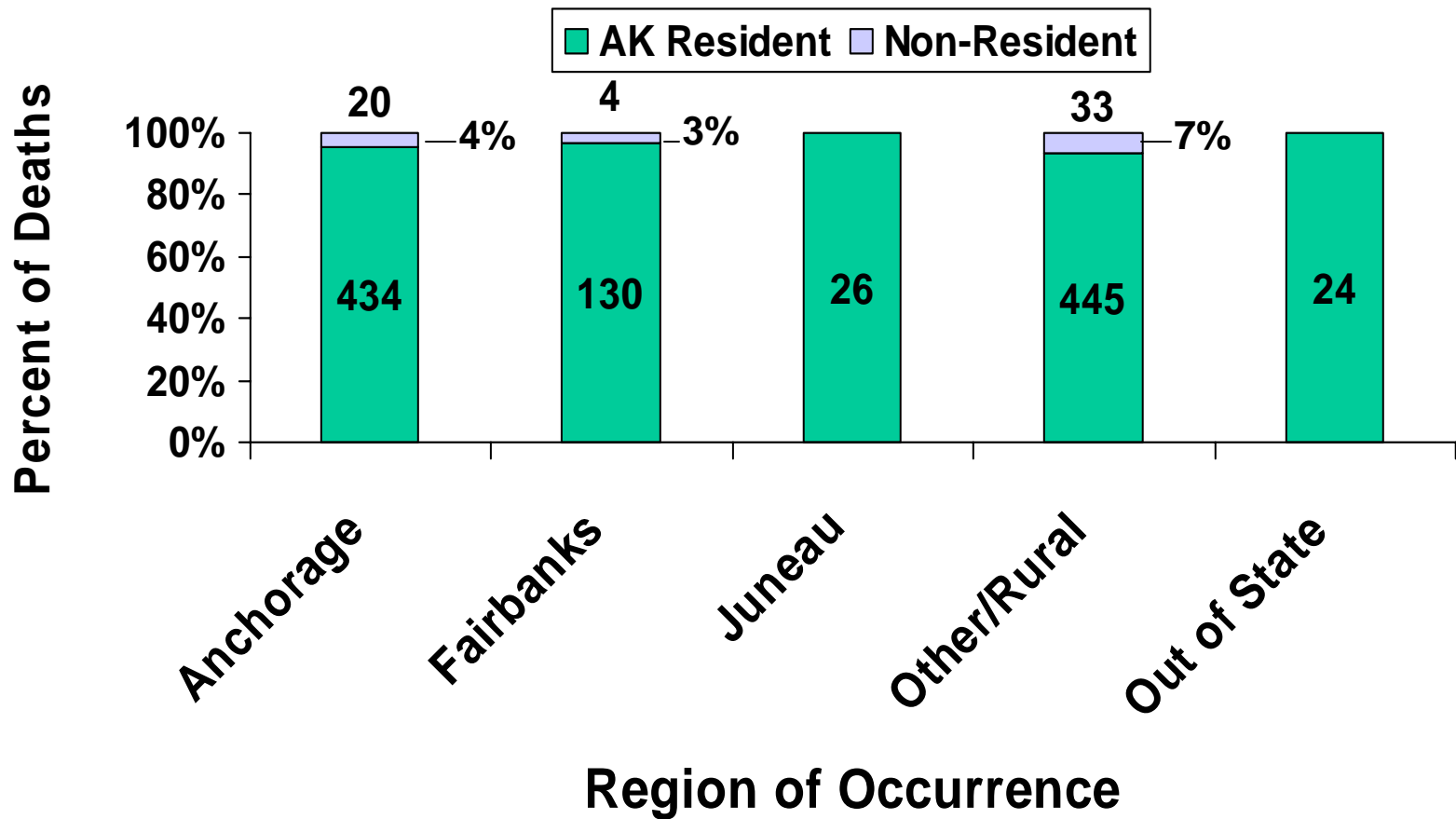
Percent of Suicides by Residency and Region of Occurrence Alaska 1981-2000



Homicides by Residency and Region of Occurrence Alaska 1981-2000



Percent of Homicides by Residency and Region of Occurrence Alaska 1981-2000



Summary: Non-Resident Injury Deaths

- ✓ 1,289 Non-Alaska residents died from injury in Alaska between 1981 and 2000; this represents 11% of all injury deaths in Alaska during this period.
- ✓ The majority of non-resident injury deaths in Alaska:
 - ✓ Were due to unintentional injuries
 - ✓ Followed from an injury occurring outside the 3 largest population centers (Anchorage, Fairbanks, Juneau)
- ✓ Compared to the pattern of specific causes of injury death seen among Alaska residents, non-resident deaths are:
 - ✓ More likely to be associated with water and air transport
 - ✓ Less likely to be due to suicide or homicide